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Vol. 8 4(1):1-25

January 1979

Cooperative PLANT PEST REPORT



Animal
and Plant
Health
Inspection
Service

U.S.
DEPARTMENT
OF AGRICULTURE

METRIC CONVERSION

1 cm = 0.393701 in
1 m = 3.28084 ft = 1.09361 yd
1 km = 0.621371 mile
1 sq cm = 0.155000 sq in
1 sq m = 10.7639 sq ft = 1.19599 sq yd
1 ha = 2.47105 acres
1 sq km = 0.386102 sq mile
1 cu m = 423.776 ft
1 liter = 0.0283784 bu
1 kg = 2.20462 lb
1 mt (metric ton) = 1.10231 short ton
1 kg/ha = 0.892179 lb/acre = 0.00892179 cwt/acre
1 mt/ha = 0.446089 ton/acre

COOPERATIVE PLANT PEST REPORT**HIGHLIGHTS****Detection**

- A MEALYBUG in Florida is new for the Western Hemisphere. (p. 6).
- A WHITEFLY in Hawaii is new to the United States. (p. 9).

New State records include ZONATE LEAF SPOT in Ohio (p. 3), SOYBEAN CYST NEMATODE in Iowa (p. 5), and a HYDROPHILID BEETLE in Hawaii. (p. 9).

For new county and island records, see pages 10-11.

First record of perfect stage for a POWDERY MILDEW in California. (p. 11).

Special Reports

Pests Not Known to Occur in the United States or of Limited Distribution.
Pumpkin Beetle (Aulacophora abdominalis) (Fabricius) (p. 13-14).

Pest Detection in the United States - 1978 (p. 15-25).

Beginning with this issue, all measurements will be reported in metric without the U.S. Customary equivalents. For your convenience, a table is supplied on the inside back cover to convert metric units to the U.S. equivalents.

Reports in this issue are for the weeks ending December 22, 1978, through January 19, 1979, unless otherwise indicated.

CONTENTS

Corn, Sorghum, Sugarcane	
Diseases.....	3
Insects.....	3
Small Grains	
Insects.....	3
Turf, Pastures, Rangeland	
Insects.....	4
Forage Legumes	
Insects.....	4
Soybeans	
Diseases.....	5
Sugar Beets	
Insects.....	5
Cole Crops	
Insects.....	5
Cucurbits	
Diseases.....	5
Beneficial Organisms and Their Enemies	
Insects.....	7
Federal and State Programs	
Insects.....	8
Hawaii Pest Report.....	9
Detection.....	10
Corrections.....	11
Light Trap Collections.....	8
Pest Interceptions of Quarantine Significance at Ports of Entry.....	12
Pests Not Known to Occur in the United States or of Limited Distribution	
Pumpkin Beetle (<u>Aulacophora abdominalis</u> (Fabricius)).....	13
Pest Detection in the United States - 1978.....	15
General Vegetables	
Insects.....	5
Deciduous Fruits and Nuts	
Insects.....	6
Citrus	
Insects.....	6
Other Trop. & Subtrop. Fruits	
Insects.....	6
Ornamentals	
Insects.....	6
Forest and Shade Trees	
Insects.....	7
Man and Animals	
Insects.....	7

CORN, SORGHUM, SUGARCANE

DISEASES

ZONATE LEAF SPOT (Gloeocercospora sorghi) - OHIO - New State record. SC District> Scioto County= infected sweet sorghum in planting adjacent to corn virus research plots near Friendship, Nile Township, August 7, 1978. Collected and determined by R.E. Hite; confirmed by C.W. Ellett. (Hite).

ROTS - WISCONSIN - Of 232 cornstalk rot samples and 262 ear mold samples collected during September and October, asexual stage of FUSARIUM KERNEL ROT (Gibberella (Fusarium) moniliforme) common on moldy ears 54% of the time. Penicillium spp., Trichothecium spp., and asexual stage of RED EAR ROT (Gibberella (Fusarium) roseum f.sp. cerealis) on 25% of ear samples, together or in various combinations. Asexual and sexual stages of GIBBERELLA STALK ROT (G. (Fusarium) roseum f.sp. cerealis) on 55% of all stalk rot samples. Asexual stage of FUSARIUM STALK ROT (G. (Fusarium) moniliforme) on 25% of samples. DIPLODIA STALK ROT (Diplodia maydis) found in 1 sample. (Lovett).

INSECTS

WESTERN CORN ROOTWORM (Diabrotica virgifera) - NORTH DAKOTA - New county records: McKenzie= collected August 30, 1978; McLean= August 31; and Emmons= September 6. Adults collected from corn in rural areas (cities unknown) by W.J. Brandvik. Determined by E. Balsbaugh. (Brandvik).

SMALL GRAINS

INSECTS

GREENBUG (Schizaphis graminum) - TEXAS - County= maximum per 0.3 row m of wheat between November 27 and December 14, 1978: Armstrong, Donley, Lipscomb, Hemphill, Hutchinson, and Hartley= 0; Hall, Collingsworth, Gray, Castro, Parmer, Moore, and Dallam= 10; Childress, Ochiltree, Hansford, and Swisher= 20; Carson, Sherman, and Floyd= 30; Roberts= 150; Oldham, Potter, Briscoe, and Motley= 1; Deaf Smith= 100; Randall and Hale= 5. (Daniels). On small grains week ending January 12, 1979: Foard and Wilbarger= 230, and Archer, Baylor, and Wichita= 112. (Jackman). OKLAHOMA - District> County= counts per 0.3 row m of wheat week ending December 22, 1978: SW> Jackson= 60-100 in 1 field, and WC> Custer= 0-15 in several fields. Week ending December 29: WC> Washita= 120 in 1 field. (Arnold).

AN APHID (Rhopalosiphum padi) - TEXAS - County= maximum per 0.3 row m of small grains week ending January 12, 1979: Foard= 20 and Wilbarger= 72. (Jackman). OKLAHOMA - District> County= counts per 0.3 row m of wheat week ending December 29, 1978: WC> Washita= up to 60 in many fields, averaged 500 in 1 field; PH> Beaver= up to 100 in older fields; and C> Logan= up to 10. (Arnold).

WINTER GRAIN MITE (Penthaleus major) - TEXAS - County= maximum per 0.3 row m of small grains week ending January 12, 1979: Foard= 6. (Jackman). OKLAHOMA - District> County= counts week ending December 22, 1978: SW> Comanche and Cotton, SC> Stephens, and C> Logan= heavy in scattered wheat fields, some fields treated. (Arnold).

TURF, PASTURES, RANGELAND

INSECTS

CHINCH BUG (Blissus leucopterus leucopterus) - INDIANA - Adults noneconomic. District> County= grass sites with adults of 28 sites surveyed end of November and beginning of December 1978: EC> Jay= 4 and Wells= 2. Heaviest infestation 145 per 0.09 sq m. In same area in 1977, adults in 11 of 13 samples, heaviest at 50 per 0.09 sq m. Western side of State contained no more than 1 infested site of 12 or more surveyed in past 3 years. (Meyer).

FORAGE LEGUMES

INSECTS

ALFALFA WEEVIL (Hypera postica) - OKLAHOMA - Occasional egg reached "black-head" stage, most seemed newly deposited. District> County= eggs (average) per 0.09 sq m of alfalfa week ending December 14, 1978: C> Grady= 0-60 (17) and SC> Stephens= 0-88 (14). (Arnold). KANSAS - County= egg averages per stem of alfalfa [average stem length in cm] December 19-20, 1978: Pratt= 0.52 [23], Kingman= 0 [-], Anderson= 0.34 [38], Franklin= 0 [3], Brown= 0 [25], Pottawatomie= trace [3], and Marshall= trace [38]. (Bell). MISSOURI - District> County= egg averages per 0.09 sq m of forage legume stems week ending January 6, 1979: NW> Andrew= 9, Atchison= 0, and Nodaway= 2. (Munson).

INDIANA - District> average number of alfalfa weevil eggs extracted by blender per 15 sq cm of forage legumes, number of fields surveyed (f), and total number of samples blended (s) for fall 1978: NW> 5.6 (4f) and (40s), NC> 6.7 (3f) and (30s), NE> 7.6 (4f) and (40s), WC> 5.9 (4f) and (40s), C> 9.1 (4f) and (40s), EC> 9.4 (5f) and (50s), SW> 41.2 (4f) and (39s), SC> 52.0 (4f) and (28s), and SE> 11.4 (3f) and (30s); statewide: 16.8 (35f) and (337s). (Meyer).

PEA APHID (Acyrthosiphon pisum) - ARIZONA - County= nymphs and adults per 10 sweeps of alfalfa week ending December 29, 1978: Maricopa= 200 each. (Bedford). Nymphs week ending January 5, 1979: Maricopa= 100. (Kirkpatrick et al.). NEW MEXICO - County= adults per alfalfa plant in 6 fields week ending January 5, 1979: Dona Ana= 0-6 in Las Cruces area. (Nielsen).

SPOTTED ALFALFA APHID (Therioaphis maculata) - ARIZONA - County= adults per 10 sweeps of alfalfa week ending January 5, 1979: Yuma= 10-13. (Kirkpatrick et al.).

MEADOW SPITTLEBUG (Philaenus spumarius) - KENTUCKY - New county records for 1978 collected and determined by P.E. Sloderbeck. (Sloderbeck).

<u>County</u>	<u>City</u>	<u>Host or Site of Collection</u>	<u>Date</u>
Marion	Lebanon	roadside	Jun 19
Logan	Russellville	red clover	Jun 8
Anderson	Lawrenceburg	sweetclover	Jun 7
Boyle	Mitchellsburg	roadside	Jun 19
Taylor	Hobson	roadside	Jun 19
Russell	Russell Springs	red clover	Jul 26
Green	Greensburg	roadside	Jun 19
Metcalfe	Edmonson	roadside	Jun 19

LYGUS BUGS (*Lygus spp.*) - ARIZONA - County= adults per 100 sweeps of alfalfa week ending January 5, 1979: Maricopa= 12-100. (Kirkpatrick et al.). Adults per 10 sweeps week ending January 9: Maricopa= 12.

SOYBEANS

DISEASES

SOYBEAN CYST NEMATODE (*Heterodera glycines*) - IOWA - New State record. Winnebago County= about 10 cysts collected in soil of soybean field near Thompson. Collected by C.R. Stoltenow, October 19, 1978. Determined by D. Williams and C.R. Stoltenow; confirmed by W. Friedman. Delimiting surveys to be conducted in 1979. (Thomasson).

SUGAR BEETS

INSECTS

CABBAGE LOOPER (*Trichoplusia ni*) - ARIZONA - Maricopa County= eggs 10-12 per 3.7 row m of sugar beets week ending January 19, 1979. (Kirkpatrick et al.).

COLE CROPS

INSECTS

DIAMONDBACK MOTH (*Plutella xylostella*) - FLORIDA - County= counts week of December 21, 1978: St. Johns= very heavy, infested 8.1 ha of cabbage at Hastings. Larvae controlled by treatment. Adults still heavy. (Workman). Week of January 18, 1979: Dade= economic on small acreages of cabbage, collards, kale, and mustard in Homestead area; treatments ineffective. (Waddill).

CABBAGE WEBWORM (*Hellula rogatalis*) - FLORIDA - County= week of December 21, 1978: St. Johns= adults heavy in cabbage fields in Hastings area. Larvae controlled by treatment. (Workman). Week of December 28: Palm Beach= seriously damaged 8.1 ha of Chinese cabbage at Belle Glade, 2 ha destroyed. (Genung).

SOUTHERN CABBAGEWORM (*Pieris protodice*) - FLORIDA - County= week of December 28, 1978: Palm Beach= damage economic to 4.1 ha of mustard greens in commercial field at Belle Glade. (Genung).

CUCURBITS

DISEASES

A POWDERY MILDEW (*Sphaerotheca fuliginea*) - CALIFORNIA - First record of perfect stage for State. Imperial County= cleistothecia on Cucurbita pepo (Zucchini squash) at Holtville, November 21, 1978. Collected and determined by D.G. Kontaxis. (Robbins).

GENERAL VEGETABLES

INSECTS

TORACCO BUDWORM (*Heliothis virescens*) - CALIFORNIA - Imperial Valley area> week ending January 5, 1979: damage still widespread on lettuce. (Flock).

DECIDUOUS FRUITS AND NUTS

INSECTS

WINTER MOTH (Operophtera brumata) - OREGON - New county record. Clackamas County= 1 female beaten from flowering plum and 1 male taken from sticky band on large birch in cemetery at Portland, December 14, 1978. Collected by J.L. Mellott. Also, 4 females beaten from apple at Clackamas, December 18, collected by J.L. Mellott and 3 winter moth females beaten from apple and cherry at Milwaukie, December 20, collected by P. Johnson. All determined by R.L. Westcott. (Penrose, Mellott).

PEAR PSYLLA (Psylla pyricola) - CALIFORNIA - Lake County= low and high counts per 50 beats of pear trees December 4-8, 1978: 9 and 150 at Scotts Valley, 0 and 122 at Upper Lake, and 4 and 160 at Big Valley; December 11-15: 7 and 69 at Scotts Valley, 0 and 159 at Upper Lake, and 1 and 93 at Big Valley; December 18-22: 4 and 49 at Scotts Valley, 0 and 125 at Upper Lake, and 4 and 62 at Big Valley; December 26-29: 4 and 38 at Scotts Valley, 0 and 98 at Upper Lake, and 0 and 26 at Big Valley; January 2-5, 1979: 1 and 54 at Scotts Valley, 0 and 69 at Upper Lake, and 4 and 103 at Big Valley. (E. Burger, Hawkins).

CITRUS

INSECTS

WOOLLY WHITEFLY (Aleurothrixus floccosus) - CALIFORNIA - Found outside of quarantine area. County= week of December 12, 1978: San Diego= collected on Citrus sp. (lemon) at Fallbrook. (Gill).

OTHER TROP. & SUBTROP. FRUITS

INSECTS

BOISDUVAL SCALE (Diaspis boisduvalli) - FLORIDA - New county record. St. Johns County= infested leaves of Musa spp. (banana plants) at residence at St. Augustine, January 5, 1979. Collected and determined by A.E. Graham; confirmed by A.B. Hamon. (Mead).

ORNAMENTALS

INSECTS

A MEALYBUG (Rhizoecus hibisci Kawai & Takagi) - FLORIDA - New Western Hemisphere record. Orange County= 2 specimens collected initially on roots of Cryptanthus sp. 'It' (bromeliad) in nursery at Gotha, September 13, 1978, by F.L. Ware. All stages collected January 8, 1979. Infested plants imported within last 10 years. Determined by E.J. Hambleton. (Mead). Previously known only from Japan on variegated Carex sp., Crinum asiaticum, Cuphea hyssopifolia, Dieffenbachia sp., variegated Hakonechloa macra, Hibiscus rosa-sinensis, Nerium oleander, Pelargonium sp., Phoenix canariensis, and Sabal sp. Omnivorous on roots of various potted ornamentals, occasionally causes serious damage to Cuphea, Hibiscus, Pelargonium, and Phoenix. (Kawai, Takagi).

A DIASPIDID SCALE (Selenaspisidus albus) - CALIFORNIA - New county record. San Luis Obispo County= nymphs and adults collected on Euphorbia spp. at San Luis Obispo, December 12, 1978, by B. Lilley. Determined by R. Gill. (Gill).

AZALEA LACE BUG (Stephanitis pyrioides) - FLORIDA - County= week of December 15, 1978: Marion= severely infested leaves of 250 ornamental Rhododendron sp. (azalea) plants in instructional nursery at Candler. Controls required. (McHenry).

FOREST AND SHADE TREES

INSECTS

A DIASPIDID SCALE (Diaspidiotus coniferarum) - FLORIDA - New county record. Leon County= adults infested Juniperus silicicola (southern redcedar) in nursery at Tallahassee, December 11, 1978. Collected by Q.G. Anglin. Determined by A.B. Hamon. (Mead).

MCKENZIE PINE MEALYBUG (Dysmicoccus pinicolus) - CALIFORNIA - New county record. Sacramento County= larvae and adults on stems of Pinus radiata (Monterey pine) at Sacramento, December 28, 1978. Collected by A. Alvarez. Determined by R. Gill. (Robbins).

AN ERIOPHYID MITE (Epitrimerus pseudotsugae) - CALIFORNIA - New county record. Mendocino County= very lightly infested Pseudotsuga menziesii (Douglas-fir) at Mendocino, December 2, 1978. Collected by T. Kono and F. Andrews. Determined by T. Kono. (Gill).

SMALLER EUROPEAN ELM BARK BEETLE (Scolytus multistriatus) - NORTH DAKOTA - New county record. Griggs County= adult collected from multilure pheromone sticky board trap on Ulmus americana (American elm) tree in rural area (city unknown) August 23, 1978. Collected and determined by C.G. Scholl. (Scholl).

MAN AND ANIMALS

INSECTS

COMMON CATTLE GRUB (Hypoderma lineatum) - OKLAHOMA - District> County= counts (average) per back in 2 herds of untreated hereford cows week ending December 22, 1978: NC> Payne= 0-16 (2.2) and 0-31 (3.7). Averages per head in herd of calves week ending December 29: EC> Pittsburg= 10. Counts (average) per back on untreated cattle week ending January 19, 1979: NC> Payne= 0-23 (4.8). (Arnold).

HORN FLY (Haematobia irritans) - FLORIDA - County= averages per head. Alachua= 3 in small beef herd at Gainesville week of January 3, 1979. (Mead).

BENEFICIAL ORGANISMS & THEIR ENEMIES

INSECTS

AN ICHNEUMONID WASP (Bathyplectes curculionis) - KENTUCKY - New county records for 1978. Reared from Hypera postica (alfalfa weevil) larvae and determined by J. Parr. (Sloderbeck).

<u>County</u>	<u>City</u>	<u>Date</u>	<u>Host of <i>H. postica</i></u>	<u>Collector</u>
Boyle	Danville	Apr 28	alfalfa	P. Sloderbeck
Calloway	Dexter	May 8	alfalfa	E. Johnson & P. Sloderbeck
Crittenden	Mattoon	May 9	sweetclover	E. Johnson & P. Sloderbeck
Edmonson	Brownsville	May 8	sweetclover	E. Johnson & P. Sloderbeck
Henry	New Castle	May 1	alfalfa	E. Johnson
Lyon	Sawanee	May 9	sweetclover	E. Johnson & P. Sloderbeck
Marshall	Benton	May 8	sweetclover	E. Johnson & P. Sloderbeck
Muhlenberg	Central City	May 8	sweetclover	E. Johnson & P. Sloderbeck
Russell	Russell Springs	Apr 27	alfalfa	P. Sloderbeck
Union	Sturgis	May 9	sweetclover	E. Johnson & P. Sloderbeck
Woodford	Versailles	Apr 25	alfalfa	P. Sloderbeck

AN ICHNEUMONID WASP (Bathyplectes anurus) - KENTUCKY - New county records.
 At Sanders, Gallatin County, at New Castle, Henry County, and at Gratz, Owen
 County= reared from Hypera postica (alfalfa weevil) larvae collected on
 alfalfa, May 1, 1978. Collected by E. Johnson. Determined by J. Parr.
 (Sloderbeck).

FEDERAL AND STATE PROGRAMS

INSECTS

CEREAL LEAF BEETLE (Oulema melanopus) - TENNESSEE - New county record. Smith
 County= larvae on oats east of Gordonsville, May 23, 1978. Collected by D.
 Hooper. Determined by J. Bogard. (Gordon).

GYPSY MOTH (Lymantria dispar) - VIRGINIA - County= males trapped during July
 through October 1978: Accomack= 10, Augusta= 1, Caroline= 1, Independent City
 of Chesapeake 1, Clarke= 26, Fairfax= 43, Frederick= 5, Gloucester= 1, King
 William= 1, Lancaster= 4, Loudoun= 96, Madison= 1, Mathews= 1, Middlesex= 1,
 Northampton= 2, and Independent City of Norfolk 2. (Hamilton et al.); Prince
 William= 15, Rappahannock= 1, Independent City of Richmond 1, Rockbridge= 1,
 Stafford= 8, Surry= 1, Independent City of Virginia Beach 5, Warren= 8, and
 Westmoreland= 4. (Foote et al.).

LIGHT TRAP COLLECTIONS

CALIFORNIA - Manteca, 1/9, temp. 8.3-13.3°C, BL - BLACK CUTWORM (Agrotis
ipsilon) 1. FLORIDA - Gainesville, 1/11-17, BL - ARMYWORM (Pseudaletia
unipuncta) 1, GRANULATE CUTWORM (Feltia subterranea) 3.

HAWAII PEST REPORT

New United States Record - Infestations of a WHITEFLY (Aleurotulus sp.) on Anthurium sp. (tailflower) at Aiea, Oahu, August 30, 1978. Collected by M. Rabago. Recently determined by S. Nakahara. Only known infestations from Oahu Island at Aiea and Keeaumoku and Manoa area of Honolulu. (Beardsley, L. Nakahara). Specimens in U.S. National Museum from Columbia, Trinidad, and Martinique on anthurium. (PPQ).

New State Record - Specimens of a HYDROPHILID BEETLE (Tropisternus salsamentus) collected from a reservoir at Hanaua, west Maui, in July 1968, by J.A. Tenorio. Determined by P.J. Spangler. (Beardsley).

Turf and Pasture - New island record for a MUSCID FLY (Atherigona reversura). Several adults swept from a Bermudagrass lawn at Kaunakakai, Molokai, on November 29, 1978, by L. Nakahara. Determined by S. Higa. (L. Nakahara).

General Vegetables - VEGETABLE LEAFMINER (Liriomyza sativae) adults heavy in 2 ha of tomato (15 cm tall to harvesting) at Kihei, Maui, week ending January 12, 1979. Larval infestations heavy on bearing tomato plants and on 1 ha of bearing cucumber at same locality. (Miyahira).

Ornamentals - New host record for a WHITEFLY (Orchamoplatus mammaeferus). All stages light on Ficus sp. at Kaimuki, Oahu, September 29, 1978. Collected by P.Y. Lai. Determined by S. Higa. (Lai). New host record for a WHITEFLY (Aleurodinus dispersus). Infestation light on Leea sp. on windward side of Oahu at Waimanalo, January 8, 1979. Collected by T. Watanabe. Determined by S. Higa. Total of 69 host plants recorded on Oahu. (L. Nakahara).

Beneficial Insects - Infestations of LANTANA LEAF BEETLE (Octotoma scabripennis) heavy, locally, at Puuanahulu, Hawaii Island, during November 1978 surveys. LANTANA SEED FLY (Ophiomyia lantanae) infested 80% of sample of 425 lantana seeds at Ulupalakua, Waihee, and Kahului, Maui, in November. (Yoshioka, Miyahira). A TEPRITID FLY (Procecidochares alani) galled 6% of Hamakua pamakani terminals at Volcano, 22% at Onomea, and 20% at Saddle Road, Hawaii Island, as indicated by surveys in November. Pamakani significantly reduced at Hualalai. Introduced control agents reduced solid stands of pamakani to small clumps. Kikuyugrass replaced pamakani in some areas. (Matayoshi, Yoshioka). LANTANA DEFOLIATOR CATERPILLAR (Hypena strigata) very active during December 1978 surveys in Ulupalakua and Kanaio area of Maui on scattered lantana in about 4,000 ha of pasture. Heavy defoliation (80-100%) observed. (Miyahira, Yoshioka).

DETECTION

NEW WESTERN HEMISPHERE RECORD

INSECTS

A MEALYBUG (Rhizoecus hibisci Kawai & Takagi) - FLORIDA - Orange County. (p. 6).

NEW UNITED STATES RECORD

INSECTS

A WHITEFLY (Aleurotulus sp.) - HAWAII - Oahu Island. (p. 9).

NEW STATE RECORDS

DISEASES

SOYBEAN CYST NEMATODE (Heterodera glycines) - IOWA - Winnebago County. (p. 5).

ZONATE LEAF SPOT (Gloeocercospora sorghi) - OHIO - Scioto County. (p. 3).

INSECTS

A HYDROPHILID BEETLE (Tropisternus salsamentus) - HAWAII - Maui Island. (p. 9).

NEW COUNTY AND ISLAND RECORDS

INSECTS

BOISDUVAL SCALE (Diaspis boisduvalli) - FLORIDA - St. Johns. (p. 6).

CEREAL LEAF BEETLE (Oulema melanopus) - TENNESSEE - Smith. (p. 8).

A DELPHACID PLANTHOPPER (Stobaera bilobata) - CALIFORNIA - Monterey County= collected on Grindelia sp. (a gumweed) at Carmel, November 9, 1978, by B. Oliver. Determined by R. Gill; confirmed by J.P. Kramer. Previously restricted to San Diego County. (Gill).

A DIASPIDID SCALE (Diaspidiotus coniferarum) - FLORIDA - Leon. (p. 7).

A DIASPIDID SCALE (Selenaspis albus) - CALIFORNIA - San Luis Obispo. (p. 7).

ERIOPHYID MITES - (Eriophyes calibaccharis and Tegonotus acidiotus) - CALIFORNIA - Mendocino County= very lightly infested Baccharis pilularis ssp. consanguinea (a coyotebrush) at Comptche, December 3, 1978. Collected by T. Kono and F. Andrews. Determined by T. Kono. (Gill).

AN ERIOPHYID MITE (Epitrimerus pseudotsugae) - CALIFORNIA - Mendocino. (p. 7).

AN ICHNEUMONID WASP (Bathyplectes anurus) - KENTUCKY - Gallatin, Henry, and Owen. (p. 8).

AN ICHNEUMONID WASP (Bathyplectes curculionis) - KENTUCKY - See p. 7-8.

MCKENZIE PINE MEALYBUG (Dysmicoccus piniculus) - CALIFORNIA - Sacramento.
(p. 7).

MEADOW SPITTLEBUG (Philaenus spumarius) - KENTUCKY - See p. 4.

A MUSCID FLY (Atherigona reversura) - HAWAII - Molokai. (p. 9).

SMALLER EUROPEAN ELM BARK BEETLE (Scolytus multistriatus) - NORTH DAKOTA -
Griggs. (p. 7).

WESTERN CORN ROOTWORM (Diabrotica virgifera) - NORTH DAKOTA - McKenzie,
McLean, and Emmons. (p. 3).

WINTER MOTH (Operophtera brumata) - OREGON - Clackamas. (p. 6).

WEEDS

ALLIGATORWEED (Alternanthera philoxeroides) - CALIFORNIA - New locations for
State. Kings County= specimens collected along creek bank near Hanford,
December 19, 1978, by J. Dunncliff and M. Keffer, and along a creek bank near
Goshen on December 20, 1978, by T. Palmer and D. Griffin. Both determined by
T.C. Fuller on December 21, 1978. (Hass).

OTHER NEW RECORDS

DISEASES

A POWDERY MILDEW (Sphaerotheca fuliginea) - CALIFORNIA - First record of
perfect stage for State. (p. 5).

CORRECTIONS

CPPR 3(44-47):618 and 623 - SPRUCE NEEDLEMINER (Endothenia albolineana) -
NORTH DAKOTA - Delete Foster County as new county record. (Scholl).

CPPR 3(48-52):675 - SOYBEAN CYST NEMATODE (Heterodera glycines) - MINNESOTA -
"... infestation confirmed in additional soybean fields ..." should read
"... infestation confirmed in 9 additional soybean fields ..."

CPPR 3(48-52):708 - FOREST INSECT AND DISEASE HIGHLIGHTS - "The defoliation ...
930 million ..." should read "The defoliation ... 930 thousand ..." "FALL
CANKERWORM ... 71 million ..." should read "FALL CANKERWORM ... 71 thousand
..." "FOREST TENT CATERPILLAR ... 638 million ..." should read "FOREST TENT
CATERPILLAR ... 638 thousand ..."

Pest Interceptions of Quarantine Significance at Ports of Entry

Plant Importation and Technical Support Staff Plant Protection and Quarantine Programs, USDA					Desti- nation
Life Stage	Host	Probable Origin	Port of Entry		
<i>Cassida circumdata</i> Herbst a chrysomelid beetle Det. R. White	adult on stems of sweet potatoes from baggage	Philippines	Honolulu	--	
<i>Dacus cucurbitae</i> Coquillet melon fly Det. R.H. Foote	larval in cucumbers from baggage	Iran	San Francisco	CA	
<i>Dichocrocis punctiferalis</i> (Guen.) larval yellow peach moth Det. R. Munkittrick	on leaves of <u>Pinus</u> from cargo	Japan	San Francisco	CA	
<i>Epilachna nigrocineta</i> Mulsant a coccineellid beetle Det. R.D. Gordon	adult on cuttings of <u>Philodendron</u> from cargo	Mexico	Brownsville	TX	
<i>Mamestra brassicae</i> (Linnaeus) cabbage moth Det. D.M. Weisman	larval on cut flowers of <u>Chrysanthemum</u> from cargo	Netherlands	Boston	USA	
<i>Phloeosinus rufid</i> Bldfd. a scolytid beetle Det. D.M. Anderson	larval adult in Dunnage	Japan	San Francisco	CA	
<i>Scolytus sulcifrons</i> Rey a scolytid beetle Det. D.M. Anderson	larval adult in wood pallets of tractor parts	Italy	New Orleans	MS	
<i>Theba pisana</i> (Müller) white garden snail Det. P.J. Lima	adult on dried <u>Lagurus</u> <u>ovatus</u> from cargo	Spain	Savannah	AL	

214
PESTS NOT KNOWN TO OCCUR IN THE UNITED STATES
Or Of
Limited Distribution C 7

PUMPKIN BEETLE,

Aulacophora abdominalis (Fabricius)
Coleoptera: Chrysomelidae

CONTRIBUTED BY: R.E. White 1/

ECONOMIC IMPORTANCE

This beetle attains pest proportions every year in Queensland, Australia. It seriously interferes with yields of cucumber, melon, pumpkin, and other cucurbits. This pest is especially injurious to seedlings, flowers, and small fruits. Spring plantings of rock melon, squash, marrow, and pumpkin can be destroyed shortly after germination by a few beetles. Growth of established plants can be seriously slowed by adults feeding on leaves. Damage to flowers and fruit of young plants may ruin prospects of an early crop.

DISTRIBUTION

Northeastern Australia, Indonesia, New Guinea, Solomon Islands, and islands within this distribution.



GENERAL DISTRIBUTION OF AULACOPHORA ABDOMINALIS (FABRICIUS)

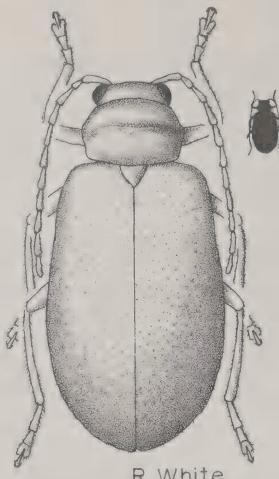
1/ Systematic Entomology Laboratory, IIBIII, Federal Research, SEA, USDA. Mail address: c/o U.S. National Museum, Washington, DC 20560.

HOSTS

Mostly cucurbit crops. Includes cucumber, marrow, melon, pumpkin and squash, but also Manihot esculenta (cassava).

CHARACTERS

ADULT - Length about 6-8 mm; surfaces moderately shiny; body above and much of remainder yellow orange, metasternum and most of abdomen dark brown to nearly black, often most of antennae, tibiae, and tarsi brownish; pronotum with distinct, sinuous, transverse impression; elytra lacking striae, finely, not densely punctured; metasternum and abdomen with moderately dense, whitish pubescence.



Aulacophora abdominalis (Fabricius), small figure equals actual size.

CHARACTERISTIC DAMAGE

Adults often cluster when feeding, preferring younger leaves and tendrils on terminals. Some leaves may be completely destroyed except for the main veins while others show little or no injury. Feeding on flowers interferes with fruit set, and feeding on fruits may cause them to wither and eventually drop. Larval feeding on roots causes the roots to swell and discolor; larval feeding on fruits in contact with the ground may cause the fruits to rot.

BIOLOGY

In Queensland, Australia, the small, oval, yellow eggs are laid singly or in small groups either on dead leaves or on the ground under food plants. The cream-colored larvae hatch in about 10 days and feed on the main root system and on finer roots near the stems. The long, narrow larvae penetrate roots for a short distance and leave most of their bodies outside on the surface. Larvae also tunnel up to 7 mm into fruits where they rest on the ground. Larvae are easily seen protruding from infested roots. After about 5 weeks the fully grown larvae, about 12 mm long, pupate in the soil at depths of about 25-75 mm. Beetles are sluggish during cloudy or cool weather but active during hot weather and readily leave plants when disturbed. At night adults seek shelter on dense foliage in or near food plants. In winter adults congregate in dead vegetation or under dead bark and emerge with the warmth of spring.

REFERENCES

May, A.W.S. 1946. Pests of cucurbit crops. *Queensland Agric. J.* 62(3):137-150.

No. 6 of Series

U.S. Dep. Agric.
Coop. Plant Pest Rep.
4(1):13-14, 1979

PEST DETECTION IN THE UNITED STATES - 1978

There were 24 new United States records reported in the "Cooperative Plant Pest Report" during 1978. These records included 17 insects, 4 diseases, 2 weeds, and 1 slug. Eight pests were reported for the first time on the North American continent--5 in California, 2 in Puerto Rico, and 1 in Maine. None of the species reported in Hawaii or Puerto Rico is known from the continental United States. There were 57 new State distribution records, 7 Puerto Rican records, and 4 U.S. Virgin Island records of species known to occur in the U.S.--6 diseases, 61 insects and ticks, and 1 weed.

NEW UNITED STATES RECORDS

<u>State & Other</u>	<u>County</u>	<u>Probable Origin</u>	<u>Collected on</u>	<u>CPPR Page</u>	<u>Economic Importance</u>
<u><i>Blatta lateralis</i> (Walker)</u> a cockroach 1/ Det. A.B. Gurney	CA	San Joaquin	Africa, Asia, Soviet Union	295	Economic
<u><i>Coloradoa tanacetina</i></u> (Walker) an aphid 1/ Det. C.F. Smith	ME	Penobscot	Europe	Tanacetum <u>vulgare</u>	89 Probably noneconomic
<u><i>Duplaspidiotus fassor</i></u> (Newstead) a diaspidid scale 3/ Det. S. Nakahara	PR	-	Barbados, Brazil, Mexico	<u>Ficus</u> sp.	11 Unknown
<u><i>Enydra martima</i></u> (Humboldt, Bonpland, and Kunth) de Candoile a composite 3/ Det. H. St. John	HI	Oahu	Pacific coast of tropical South America	-	130 Probably noneconomic

<u>State & Other</u>	<u>County</u>	<u>Probable origin</u>	<u>Collected on</u>	<u>CPPR Page</u>	<u>Economic Importance</u>
<u><i>Frankliniella brevicaulis</i></u> Hood 3/ a thrips Det. S. Nakahara	PR -	Panama, South America, West Indies	<u>Zea mays</u> .	87	Probably noneconomic
<u><i>Gallobelgicus saevus</i></u> Bergroth a reduviid bug 1/ Det. J.L. Herring	HI Oahu	Philippines	Light trap	136	Probably noneconomic
<u><i>Gyponana germari</i></u> (Stål) a leafhopper 3/ Det. J.P. Kramer	HI Oahu	Mexico, Central America	-	157	Probably noneconomic
<u><i>Heterodera mani</i></u> Marchews a cyst nematode 1/ Det. A.M. Golden	CA Marin	Europe	<u>Distichlis</u> <u>spicata</u>	674	Probably noneconomic
<u><i>Kuwanaspis linearis</i></u> (Green) a diaspisid scale 2/ Det. S. Nakahara	PR -	Colombia, Sri Lanka	<u>Bambusa</u> sp.	11	Unknown
<u><i>Lepidosaphes verniculus</i></u> Mamet a diaspisid scale 3/ Det. S. Nakahara	PR -	Lesser Antilles, Mauritius, Venezuela	<u>Cocos</u> <u>nucifera</u> , <u>Yucca</u> sp.	11	Unknown
<u><i>Melanaphis sacchari</i></u> (Zehntner) sugarcane aphid 4/ Det. L.M. Russell	FL Palm Beach	Hawaii, Africa, Asia, South America, West Indies	<u>Saccharum</u> sp.	475	Potentially economic
<u><i>Mycetaspis apicata</i></u> (Newstead) a diaspisid scale Det. S. Nakahara	TX Cameron	Mexico, Panama, South America	<u>Pithecel-</u> <u>lobium</u> <u>flexicaule</u>	617	Unknown

<u>State & Other</u>	<u>County</u>	<u>Probable Origin</u>	<u>Collected on</u>	<u>CPPR Page</u>	<u>Economic Importance</u>
<u><i>Octaspidiotus araucariae</i></u> a diaspidid scale 2/ Det. S. Nakahara	PR	-	Hawaii, Oceania	<u><i>Araucaria</i></u> <u><i>excelsa</i></u>	11 Unknown
<u><i>Operophtera brumata</i></u> (Linnaeus) winter moth Det. D.C. Ferguson	OR	Multnomah	Africa, Canada, Europe, Japan	-	618 Economic
<u><i>Opuntiopsis carinata</i></u> (Cockerell) a diaspidid scale Det. A.B. Hamon	FL	Palm Beach	Central America, Mexico	<u><i>Beaucarnea</i></u> <u><i>recurvata</i></u>	313 Probably noneconomic
<u><i>Orthezia pseudinsignis</i></u> Morrisson an ortheziid scale Det. S. Nakahara	TX	Cameron	Guatemala, Mexico, Peru	Unknown plant	621 Unknown
<u><i>Osmia cornifrons</i></u> (Radoszkowskij) an osmia bee Det. S.W.T. Batra	MD	Prince Georges	Japan	-	166 Beneficial
<u><i>Parabemisia myricae</i></u> (Kuwana) a whitefly 2/ Det. E. Chao	CA	Orange	Hawaii, Far East	<u><i>Gardenia</i></u> sp.	617 Unknown
<u><i>Parentucellia latifolia</i></u> (L.) Caruel a weed 1/ Det. J.T. Howell	CA	Marin	Europe, Turkey	<u><i>Trifolium</i></u> <u><i>subterraneum</i></u>	290 Could be economic

<u>State & Other</u>	<u>County</u>	<u>Probable Origin</u>	<u>Collected on</u>	<u>CPPR Page</u>	<u>Economic Importance</u>
<u>Puccinia melanocephala</u> (H. Sydow & P. Sydow) sugarcane rust 3/ Det. L.J. Liu; conf. J.F. Herren	PR	-	Africa, Asia, Greater Antilles, Soviet Union (east)	Saccharum spp.	672 Economic
<u>Uromyces aloes</u> (Coker) Magnus aloe rust 1/ Det. P. Hiatt & K. Sims; conf. F. Polack	CA	San Diego	Africa, India, United Kingdom in greenhouses	<u>Aloe</u> plants	178 Probably noneconomic
<u>Ustilago scitaminosa</u> Sydow sugarcane smut 1/ Det. E.H. Toed; conf. F. Polack	FL	Hendry	Hawaii, Africa, Asia, South America, West Indies	Saccharum spp.	323 Economic
<u>Vaginulus plebeius</u> (Fischer) a slug 3/ Det. V. Konde & C. Christensen	HI	Hawaii Island	Oceania, West Indies	<u>Phaseolus</u> <u>vulgaris</u>	681 Unknown
<u>Xylopsocus capucinus</u> (Fabricius) a bostrichid beetle Det. E. Gerberg	FL	Dade	All tropical regions	<u>Manihot</u> <u>esculentia</u>	177 Possibly economic

1/ First report for Western Hemisphere.

2/ First time reported from North America.

3/ Not known to occur in continental United States.

4/ New continental U.S. record; known to occur in Hawaii or Puerto Rico.

NEW STATE AND OTHER RECORDS - 1978

<u>Species</u>	<u>State & Other</u>	<u>County</u>	<u>Collected on</u>	<u>Determiner</u>	CPPR <u>Page</u>
<u>Diseases</u>					
<u>Colletotrichum graminicola</u> anthracnose leaf spot	IA	Muscatine	<u>Zea mays</u>	D.J. Williams	407
<u>Colletotrichum lindemuthianum</u> bean anthracnose 'gamma' strain	MI	Isabella	<u>Phaseolus vulgaris</u> cv. Redlock light red kidney bean	A.W. Saettler	575
<u>Heterodera glycines</u> soybean cyst nematode	DE	Sussex	Field previously in <u>Glycine max</u>	A.M. Golden	675
	MN	Faribault	<u>Glycine max</u>	D.H. MacDonald	574
<u>Leveilulla (Oidiopsis) taurica</u> a powdery mildew	CA	Imperial	<u>Lycopersicon esculentum</u>	D.G. Kontaxis	293
Maize chlorotic mottle virus	NE	Harlan	<u>Zea mays</u>	L. Lane	408
<u>Insects</u>					
<u>Acyrthosiphon kondoi</u> blue alfalfa aphid	TX	Hudspeth	<u>Medicago sativa</u>	R.C. Dickson	291
	WA	Klickitat	<u>Medicago sativa</u>	M.B. Stoetzel	591
<u>Aleurodicus dispersus</u> a whitefly	HI	Oahu Island	<u>Terminalia catappa</u>	J.W. Beardsley	620
<u>Aonidiella inornata</u> a diaspisid scale	PR	-	Unknown plant and <u>Citrus</u> sp.	S. Nakahara	11

<u>Species</u>	<u>State & Other</u>	<u>County</u>	<u>Collected on</u>	<u>Determiner</u>	<u>CPPR Page</u>
<u>Apterona helix</u> a psychid moth	MA	Berkshire	Domiciles, oriental trees, flowers, and garden produce	D.R. Davis	622
<u>Asterolecanium</u> <u>miliaris robustum</u> a pit scale	TX	Cameron	Bamboo	S. Nakahara	617
<u>Asterolecanium</u> <u>pseudomiliaris</u> a pit scale	TX	Cameron	Bamboo	S. Nakahara	617
<u>Brevennia rehi</u> a mealybug	PR	-	Unknown grass	S. Nakahara	11
	U.S. VI	-	Undeter- mined grass species	S. Nakahara	578
<u>Caulocampus</u> <u>acericaulis</u> maple petiole borer	KS	Riley	<u>Acer</u> <u>saccharum</u>	D.R. Smith	42
<u>Chortinaspis</u> <u>subchortina</u> a diaspidid scale	HI	Oahu	<u>Brachiaria</u> <u>mutica</u> and <u>Stenotaphrum</u> <u>secundatum</u>	S. Nakahara	147
<u>Coloradoa</u> <u>tanacetina</u> an aphid	NY	Albany	<u>Tanacetum</u> <u>vulgare</u>	C.F. Smith	89
<u>Dactynotus</u> <u>russellae</u> an aphid	UT	Summit	-	V.F. Eastop	59
<u>Dasineura</u> <u>gleditchiae</u> a cecidomyiid midge	CA	Santa Clara	<u>Gleditsia</u> spp.	M. Wasbauer	618

<u>Species</u>	<u>State & Other</u>	<u>County</u>	<u>Collected on</u>	<u>Determiner</u>	<u>CPPR Page</u>
<u>Dermacentor albipictus</u> winter tick	MS	Claiborne	Horses	R.L. Combs	69
<u>Dialeurodes kirkaldyi</u> Kirkaldy whitefly	TX	Cameron	<u>Jasminum</u> sp.	S. Nakahara	622
<u>Diaparsis n.sp.</u> an ichneumonid wasp	NJ	Sussex	<u>Oulema melanopus</u>	V.E. Montgomery	373
<u>Diaspidiotus mccoombi</u> a diaspidid scale	AL	Lee	<u>Pinus taeda</u>	M.L. Williams	6
<u>Eurycoccus jessica</u> a mealybug	AL	Randolph	<u>Carya tomentosa</u>	M.L. Williams	6
<u>Forda formicaria</u> an aphid	OR	Polk	<u>Sorghum halepense</u>	T. Kono	497
<u>Frankliniella schultzei</u> a thrips	PR	-	<u>Clitoria ternatea</u>	S. Nakahara	57
<u>Glischrochilus quadrisignatus</u> a nitidulid beetle	WV	Randolph	Decaying <u>Solanum tuberosum</u> seed pieces	J.M. Kingsolver	558
<u>Hemicoelus carinatus</u> an anobiid beetle	WI	Walworth	Old pine subflooring	R.E. White	420
<u>Hexarthrum ulkei</u> a weevil	IL	Cook	Woodwork of buildings	L.L. Buchanan	206
<u>Hippodamia sinuata crotchi</u> a lady beetle	OK	Texas	<u>Schizaphis graminum</u>	R.D. Gordon	278

<u>Species</u>	<u>State & Other</u>	<u>County</u>	<u>Collected on</u>	<u>Determiner</u>	<u>CPPR Page</u>
<u>Hypera castor</u> a weevil	ND	McKenzie	Soil	D.R. Whitehead	578
<u>Ixodiphagus texanus</u> an encyrtid wasp	OK	Nowata	<u>Haemaphysalis</u> <u>leporispalustris</u>	E.E. Grissell	619
<u>Kurodaia flammei</u> a biting Louse	HI	Kauai Island	<u>Asio flammeus</u> <u>sandwichensis</u>	K.C. Emerson	620
<u>Lemophagus curtus</u> an ichneumonid wasp	KY	Fayette	<u>Oulema melanopus</u>	P.R. DeWitt	295
<u>Lepidosaphes rubrovittatus</u> a diaspidid scale	PR	-	<u>Ficus lyrata</u>	S. Nakahara	122
<u>Magdalalis gentilis</u> a weevil	WI	Wood	<u>Pinus sylvestris</u>	D.R. Whitehead	437
<u>Melanopleurus belfragei</u> 5/ a lygaeid bug	OK	Cimarron	Unidentified weed	D.C. Arnold	622
<u>Neoclytus mucronatus</u> <u>mucronatus</u> a cerambycid beetle	WV	Kanawha	<u>Betula</u> sp.	T.J. Spilman	618
<u>Neophyllaphis podocarpi</u> an aphid	TX	Cameron	<u>Podocarpus</u> sp.	S. Nakahara	617
<u>Odonaspis penicillata</u> a diaspidid scale	PR	-	<u>Bambusa</u> sp.	S. Nakahara	11
	TX	Cameron	Bamboo	S. Nakahara	617

<u>Species</u>	<u>State & Other</u>	<u>County</u>	<u>Collected on</u>	<u>Determiner</u>	<u>CPPR Page</u>
<u>Odonaspis ruthae</u> a diaspidid scale	PR	-	Undeter-mined grass species	S. Nakahara	218
	U.S. VI	-	Undeter-mined grass species	S. Nakahara	578
<u>Olixon banksii</u> a rhopalosomatid wasp	ND	Dunn	<u>Medicago sativa</u>	A.S. Menke	622
<u>Operophtera brumata</u> winter moth	WA	Clark	Near or from fruit	D.C. Ferguson	678
		San Juan	<u>Malus sylvestris</u>	D.C. Ferguson	678
<u>Otiorhynchus rugosostriatus</u> a weevil	IL	Lake	Household	J.K. Bouseman; D.R. Whitehead	178
<u>Pamphilus amplectus</u> a webspinning sawfly	WV	Hardy	Survival Security Malaise trap	D.R. Smith	44
<u>Parandra brunnea</u> a cerambycid beetle	MT	Yellowstone	<u>Acer negundo</u>	J. Chemsak	618
<u>Parlatoria proteus</u> a diaspidid scale	PR	-	<u>Calophyllum brasiliense</u> , <u>Brassia actinophylla</u>	S. Nakahara	11
<u>Peritrechus fraternus</u> a Lygaeid bug	VA	Essex	-	E.R. Hoebeke; J.A. Slater	520
<u>Phenacoccus solenopsis</u> a mealybug	FL	Dade	<u>Ambroisa</u> sp.	A.B. Hamon; D.R. Miller	622

<u>Species</u>	<u>State & Other</u>	<u>County</u>	<u>Collected on</u>	<u>Determiner</u>	<u>CPPR Page</u>
<u>Phyllophaga aurea</u> a scarab	AR	Washington	Light trap	E.P. Rouse	644
<u>Podisus placidus</u> a stink bug	OK	Payne		D.C. Arnold	316
<u>Pseudolampsis guttata</u> a chrysomelid beetle	FL	Unknown	Blacklight trap	E.J. Ford; R.E. White	167
	GA	Ware	Blacklight trap	E.J. Ford; R.E. White	167
	MD	Somerset	Blacklight trap	E.J. Ford; R.E. White	167
<u>Rhagoletis berberis</u> a tephritid fly	UT	Cache	Malaise trap	R.H. Foote	622
<u>Rhizotrogus majalis</u> European chafer	MI	Oakland	Under stump	R.S. Taylor	595
<u>Sanbornia juniperi</u> an aphid	NV	Washoe	<u>Juniperus</u> sp.	T. Kono; R.C. Dickson	678
<u>Stenolophus quinquepustulatus</u> a carabid beetle	HI	Oahu	Light trap	G.E. Ball	8
<u>Theroaphis maculata</u> spotted alfalfa aphid	MA	Hampshire	<u>Medicago</u> <u>sativa</u>	M.B. Stoetzel	527
<u>Trionymus caricis</u> a mealybug	AL	Randolph	<u>Andropogon</u> sp.	M.L. Williams	6
<u>Trogoderma granarium</u> khapra beetle	NJ	Union	Warehouse	F. Krim	76

<u>Species</u>	<u>State & Other</u>	<u>County</u>	<u>Collected on</u>	<u>Determiner</u>	<u>CPPR Page</u>
<u>Umbonia crassicornis</u> a treehopper	U.S. VI	-	<u>Calliandra</u> sp.	C.E. Miller; J.P. Kramer	605
<u>Xylosandrus compactus</u> black twig borer	U.S. VI	-	<u>Cajanus</u> <u>cajan</u>	D.M. Anderson	87
<u>Xylosandrus germanus</u> a scolytid beetle	LA	Pointe Coupee Parish	<u>Carya</u> <u>illinoensis</u>	D.M. Anderson	350
<u>Weeds</u>					
<u>Peganum harmala</u> harmel	CA	San Diego	Herb nursery	G.D. Barbe	622

5/ Reported as Lygaeus belfragei in Vol. 3.

U.S. Dep. Agric.
Coop. Plant Pest Rep.
4(1):15-25, 1979

UNITED STATES DEPARTMENT OF AGRICULTURE
Animal and Plant Health Inspection Service
Hyattsville, Maryland 20782

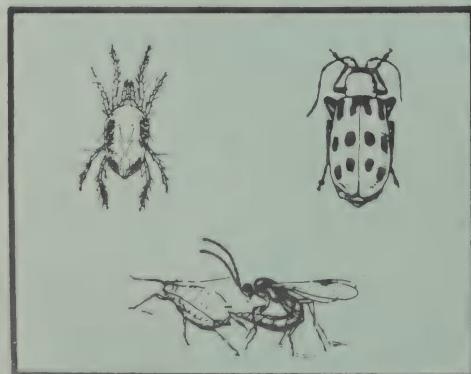
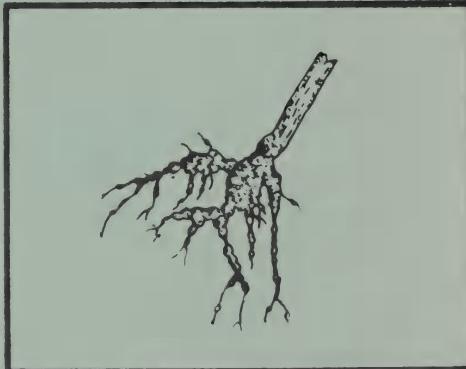
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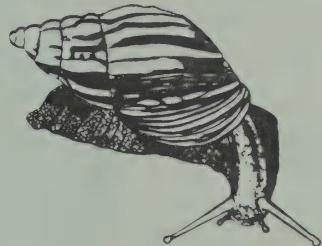


4(2):27-36

February 2, 1979

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Cooperative PLANT PEST REPORT



Animal
and Plant
Health
Inspection
Service

U.S.
DEPARTMENT
OF AGRICULTURE



This publication is distributed weekly to Federal and State agencies, universities, farmers, and others interested in containing or controlling pests in the United States.

Data included in this publication are compiled from reports submitted by cooperating State, Federal and other agricultural and industrial specialists. Accuracy of the reports is not verified prior to publication.

Cooperative Plant Pest Report supersedes *Cooperative Economic Insect Report*, which was discontinued with Volume 25, Numbers 49-52, 1975.

Correspondence should be directed to:

CPPR

New Pest Detection and Survey Staff
Plant Protection and Quarantine Programs
Animal and Plant Health Inspection Service
U.S. Department of Agriculture
Federal Building #1
Hyattsville, Maryland 20782

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February 2, 1979

4(2):27-36

COOPERATIVE PLANT PEST REPORT

HIGHLIGHTS

Detection

For new county records see pages 34-35.

Reports in this issue are for the week ending January 26 unless otherwise indicated.

CONTENTS

Corn, Sorghum, Sugarcane Insects.....	29	Cucurbits Insects.....	31
Small Grains Insects.....	29	General Vegetables Insects.....	31
Turf, Pastures, Rangeland Insects.....	30	Deciduous Fruits and Nuts Insects.....	31
Forage Legumes Insects.....	30	Small Fruits Insects.....	32
Miscellaneous Field Crops Insects.....	30	Ornamentals Insects.....	32
Potatoes, Tomatoes, Peppers Insects.....	30	Man and Animals Insects.....	32
Beans and Peas Insects.....	31	Stored Products Insects.....	32
Beneficial Organisms and Their Enemies Insects.....	32		
Federal and State Programs Insects.....	33		
Hawaii Pest Report.....	33		
Detection.....	34		
Corrections.....	35		
Light Trap Collections.....	33		
Pest Interceptions of Quarantine Significance at Ports of Entry.....	36		

CORN, SORGHUM, SUGARCANE

INSECTS

SOUTHERN CORN ROOTWORM (Diabrotica undecimpunctata howardi) - TEXAS - New county record. Comal County= 2 adults per sweet corn plant collected from field at New Braunfels, October 30, 1978. Collected and determined by L. Beikman. (Jackman).

BANDED CUCUMBER BEETLE (Diabrotica balteata) - TEXAS - New county records. Comal County= 4 adults per sweet corn plant collected from field near New Braunfels, October 30, 1978. Karnes County= 5 adults collected on corn in garden at Karnes City, May 16, 1978. Both collected and determined by L. Beikman. (Jackman).

A WEEVIL (Anacentrinus deplanatus) - TEXAS - New county record. Guadalupe County= 1 adult collected in sorghum field at Marion, July 19, 1977, by L. Beikman. Determined by B.J. Abraham and D.R. Whitehead. (Jackman).

RICE STINK BUG (Oebalus pugnax) - TEXAS - New county records. Ft. Bend County= 1 adult collected in sorghum field at Wallace, May 29, 1978, by C.H. May. Determined by S. Fishman. Guadalupe County= 3 adults per sorghum plant collected in field near New Berlin, June 26, 1978. Wilson County= 4 adults per sweep of sorghum collected 3 km southwest of Kosciusko, June 12, 1978. Both collected and determined by L. Beikman. (Jackman).

SOUTHERN GREEN STINK BUG (Nezara viridula) - TEXAS - New county records. Karnes County= 4 adults collected in sorghum field at Kenedy, May 16, 1978. Wilson County= 2 adults per sweep of sorghum collected 3 km southwest of Kosciusko, June 2, 1978. Both collected and determined by L. Beikman. (Jackman).

CONCHUELA (Chlorochroa ligata) - TEXAS - New county record. Guadalupe County= 3 adults per sorghum head collected in field 3 km east of Marion, May 10, 1978. Collected and determined by L. Beikman. (Jackman).

A LEAFHOPPER (Homalodisca insolita) - TEXAS - New county record. Bexar County= 1 adult collected in milo field at Converse, May 11, 1977, by L. Beikman. Determined by D.D. Kopp. (Jackman).

SMALL GRAINS

INSECTS

GREENBUG (Schizaphis graminum) - TEXAS - County= counts per 0.3 row m of small grains January 6-9: Archer= 0-2, Baylor= 15 maximum, Fisher= 1-2, Foard= 21-120, and Wilbarger= 2-13. (Jackman).

RICE STINK BUG (Oebalus pugnax) - TEXAS - New county records. Comal County= 5 adults per sweep of wheat collected in field at New Braunfels, May 8, 1978. Collected and determined by L. Beikman. Liberty County= 4 adults collected in rice field at Dayton, June 21, 1978, by R. Linn. Determined by F.R. Eads. (Jackman).

TURF, PASTURES, RANGELAND

INSECTS

GRAY LAWN LEAFHOPPER (Exitianus exitiosus) - TEXAS - New county record. Bexar County= 100 adults collected on Coastal bermudagrass at San Antonio, May 26, 1977, by L. Beikman. Determined by D.D. Kopp. (Jackman).

SOUTHERN GREEN STINK BUG (Nezara viridula) - TEXAS - New county record. Comal County= 2 adults per sweep collected on Coastal bermudagrass 6 km northeast of New Braunfels, May 8, 1978. Collected and determined by L. Beikman. (Jackman).

A PLANT BUG (Trigonotylus ruficornis) - TEXAS - New county record. Bexar County= 6 adults collected on Coastal bermudagrass at San Antonio, May 26, 1977, by L. Beikman. Determined by B.J. Abraham. (Jackman).

FORAGE LEGUMES

INSECTS

PEA APHID (Acyrthosiphon pisum) - FLORIDA - Alachua County= 225 specimens, mostly adults, collected in 100 sweeps of alfalfa [10 cm] at Gainesville week ending January 19. (Mead).

SPOTTED ALFALFA APHID (Theroaphis maculata) - FLORIDA - Alachua County= very light on alfalfa [10 cm] at Gainesville week ending January 19. (Mead).

MISCELLANEOUS FIELD CROPS

INSECTS

COCKLEBUR WEEVIL (Rhodobaenus tredecimpunctatus) - TEXAS - New county record. Bexar County= 2 adults collected on sunflower at San Antonio, June 16, 1977, by D.S. Campbell and L. Beikman. Determined by B.J. Abraham. (Jackman).

POTATOES, TOMATOES, PEPPERS

INSECTS

COLORADO POTATO BEETLE (Leptinotarsa decemlineata) - TEXAS - New county records. Guadalupe County= 4 adults per potato plant in garden 3 km northeast of Cibolo, May 10, 1978. Karnes County= 3 adults per potato plant in garden at Runge, May 16, 1978. Collected and determined by L. Beikman. (Jackman).

VARIEGATED CUTWORM (Peridroma saucia) - TEXAS - New county record. Comal County= 2 adults collected on tomatoes in garden at New Braunfels, May 8, 1978. Both collected and determined by L. Beikman. (Jackman).

CABBAGE LOOPER (Trichoplusia ni) - TEXAS - New county record. Bexar County= 1 immature collected on tomatoes in garden at San Antonio, May 23, 1977, by L. Beikman. Determined by R.L. Hodgdon. (Jackman).

LEAFFOOTED BUG (Leptoglossus phyllopus) - TEXAS - New county records. Bexar County= 2 adults per tomato plant in garden at East Central, June 23, 1978. Caldwell County= 1 adult collected from tomatoes and okra in garden at Fentress, July 19, 1978. Both collected and determined by L. Beikman. (Jackman).

BEANS AND PEAS

INSECTS

A LEAFHOPPER (*Cuerna lateralis*) - TEXAS - New county record. Bexar County= 1 adult collected on beans in garden at San Antonio, May 11, 1977, by L. Beikman. Determined by D.D. Kopp. (Jackman).

CUCURBITS

INSECTS

SQUASH VINE BORER (*Melittia satyriniformis*) - TEXAS - New county records. Comal County= 2 immatures collected on squash in garden 5 km northwest of New Braunfels, September 20, 1978. Collected and probably determined by L. Beikman. Karnes County= 5 adults collected on squash in garden at Karnes City, May 16, 1978. Collected and determined by L. Beikman. (Jackman).

SOUTHERN CORN ROOTWORM (*Diabrotica undecimpunctata howardi*) - TEXAS - New county record: Karnes= 5 adults per corn, squash, and cucumber plant in garden at Karnes City, May 16, 1978. Collected and determined by L. Beikman. (Jackman).

STRIPED CUCUMBER BEETLE (*Acalymma vittata*) - TEXAS - New county records. Guadalupe County= 3 adults per squash plant collected in garden 10 km west of Luling, June 28, 1978. Karnes County= 4 adults per cucumber plant collected in garden at Karnes City, May 16, 1978. Both collected and determined by L. Beikman. (Jackman).

A CHRYSOMELID BEETLE (*Diabrotica tibialis*) - TEXAS - New county record. Karnes County= 20 adults collected on squash and cucumbers in garden at Karnes City, May 16, 1978. Collected and determined by L. Beikman. (Jackman).

A LEAFHOPPER (*Homalodisca coagulata*) - TEXAS - New county record. Bexar County= 2 adults collected on squash in garden at San Antonio, May 23, 1977, by L. Beikman. Determined by R.L. Hodgdon. (Jackman).

SQUASH BUG (*Anasa tristis*) - TEXAS - New county records. Guadalupe County= 10 adults and immatures collected on squash in garden 3 km south of Weinert, June 28, 1978. Wilson County= 20 immatures and adults collected on squash in garden 8 km northwest of Nixon, June 19, 1978. Both collected and determined by L. Beikman. (Jackman).

GENERAL VEGETABLES

INSECTS

LEAFFOOTED BUG (*Leptoglossus phyllopus*) - TEXAS - New county record. Gonzales County= 2 adults collected on okra in garden at Gonzales, July 20, 1978, by Barham (no initials given) and L. Beikman. Determined by L. Beikman. (Jackman).

DECIDUOUS FRUITS AND NUTS

INSECTS

PEAR PSYLLA (*Psylla pyricola*) - CALIFORNIA - Lake County= low and high counts per 50 beats of pear trees January 8-12: 0 and 50 at Upper Lake and 0 and 10 at Big Valley. (E. Burger, Hawkins).

SMALL FRUITS

INSECTS

ROSE SCALE (Aulacaspis rosae) - FLORIDA - New county record. Hernando County= infestation scattered on stems of ornamental Rubus spp. (dewberry) near Spring Lake, January 23, 1979. Collected by K.C. Lowery and J.T. Felty. Determined by A.B. Hamon. (Mead).

ORNAMENTALS

INSECTS

SADDLEBACK CATERPILLAR (Sibine stimulea) - CALIFORNIA - Second time pest reported outside of quarantine. San Diego County= 15 larvae per stem of ornamental areca palm January 15. (Gill).

A MEALYBUG (Rhizoecus americanus) - FLORIDA - Palm Beach County= adults severely infested roots of all 500 Phoenix roebelenii (pigmy date palm) plants, all 270 Chamaedorea sp. (a palm) plants, and 90% of 12,366 Chrysalidocarpus lutescens (areca palm) in nursery at Delray Beach week of January 19. All plants quarantined. Control recommended. (Bennett, Miles).

A DIASPIDID SCALE (Melanaspis smilacis) - FLORIDA - New county record. Hernando County= infestation scattered on stems of Baccharis sp. (salt bush) and Sambucus sp. (elderberry bush) near Spring Lake, January 22, 1979. Collected by K.C. Lowery and J.T. Felty. Determined by A.B. Hamon. (Mead).

MAN AND ANIMALS

INSECTS

COMMON CATTLE GRUB (Hypoderma lineatum) - FLORIDA - Alachua County= grubs averaged 9 per animal, maximum 39, in herd of 18 Angus cattle at Micanopy week of January 23. (Mead).

SOUTHERN FIRE ANT (Solenopsis xylomi) - TEXAS - New county record. Childress County= adults collected after stinging man in corn field at Childress, September 26, 1978, by F. McNutt. Determined by E.P. Boring and J.A. Jackman. (Jackman).

STORED PRODUCTS

INSECTS

NAVEL ORANGEWORM (Amyelois transitella) - CALIFORNIA - Fresno County= 3rd to 4th instar larvae and pupae infested 5-10% of stored dooryard walnuts at Fresno. (Dunnegan).

BENEFICIAL ORGANISMS & THEIR ENEMIES

INSECTS

A STINK BUG (Stiretrus anchorago) - TEXAS - New county record. Bexar County= 1 adult collected on okra in garden at San Antonio, May 22, 1977, by L. Beikman. Determined by D.D. Kopp. (Jackman).

FEDERAL AND STATE PROGRAMS

INSECTS

GRASSHOPPERS - TEXAS - New county records. Bexar County= 2 Melanoplus differentialis adults per corn plant collected in garden at San Antonio, June 27, 1977. Five Schistocerca americana adults collected in sorghum field at San Antonio, June 14, 1977. Both collected by L. Reikman. Both determined by R.J. Abraham. (Jackman).

SCREWWORM (Cochliomyia hominivorax) - Total of 27 cases reported from continental United States, December 3, 1978, through January 6, 1979, as follows: Texas 9, New Mexico 2, Arizona 15, California 1. (Meadows). Total of 226 cases confirmed in portion of Barrier Zone in Republic of Mexico December 31 through January 6. (Williams, Smith). Number of sterile flies released December 3 through January 6 totaled 634,030,880 as follows: Texas 530,550,080, Arizona 98,725,200, California 4,755,600. (Meadows). Total of 730,523,320 sterile flies released within Barrier of Mexico, December 3 through January 6. (Williams, Smith).

HAWAII PEST REPORT

Turf and Pastures - Adults of a GEOMETRID MOTH (Semiothisa santaremaria) heavy in blacklight traps at Barbers Point Naval Air Station, Oahu, January 1-20. Adults 26 and 14 per trap per week during November and December 1978, respectively, and 133 adults per trap per week in January 1979. Believed to be breeding in scrub Leucaena leucocephala (koa-haole) in above area. (L. Nakahara).

LIGHT TRAP COLLECTIONS

ARIZONA - Mesa, 1/15-21, BL - BLACK CUTWORM (Agrotis ipsilon) 1, VARIEGATED CUTWORM (Peridroma saucia) 1. CALIFORNIA - Bellota, 1/17, temp. 3.3-12°C, BL - Black cutworm 2. FLORIDA - Gainesville, 1/18-24, BL - ARMYWORM (Pseudaletia unipuncta) 2, black cutworm 0, CABBAGE LOOPER (Trichoplusia ni) 0, CORN EARWORM (Heliothis zea) 0, FALL ARMYWORM (Spodoptera frugiperda) 1, SALTMARSH CATER-PILLAR (Estigmene acrea) 0, TOBACCO BUDWORM (H. virescens) 0, TOBACCO HORNWORM (Manduca sexta) 0, TOMATO HORNWORM (M. quinquemaculata) 0, YELLOWSTRIPED ARMYWORM (S. ornithogalli) 0.

DETECTION

NEW COUNTY RECORDS

INSECTS

AMERICAN GRASSHOPPER (Schistocerca americana) - TEXAS - Bexar. (p. 33).

BANDED CUCUMBER BEETLE (Diabrotica balteata) - TEXAS - Comal and Karnes (p. 29).

CABBAGE LOOPER (Trichoplusia ni) - TEXAS - Bexar. (p. 30).

A CERAMBYCID BEETLE (Mecas pergrata) - TEXAS - Bexar County= 1 adult collected under spinach plant in garden at Southton, about May 28, 1978, by L. Beikman. Determined by M.E. Rice. (Jackman).

A CHRYSOMELID BEETLE (Diabrotica tibialis) - TEXAS - Karnes. (p. 31).

COCKLEBUR WEEVIL (Rhodobaenus tredecimpunctatus) - TEXAS - Bexar. (p. 30).

COLORADO POTATO BEETLE (Leptinotarsa decemlineata) - TEXAS - Guadalupe and Karnes. (p. 30).

CONCHUELA (Chlorochroa ligata) - TEXAS - Guadalupe. (p. 29).

A DIASPIDID SCALE (Melanaspis similacis) - FLORIDA - Hernando. (p. 32).

DIFFERENTIAL GRASSHOPPER (Melanoplus differentialis) - TEXAS - Bexar. (p. 33).

GRAY LAWN LEAFHOPPER (Exitianus exitiosus) - TEXAS - Bexar. (p. 30).

LEAFFOOTED BUG (Leptoglossus phyllopus) - TEXAS - Bexar and Caldwell (p. 30) and Gonzales (p. 31).

A LEAFHOPPER (Cuerna lateralis) - TEXAS - Bexar. (p. 31).

A LEAFHOPPER (Draeculacephala delongi) - TEXAS - Bexar County= 1 adult collected on potatoes in garden at San Antonio, May 11, 1977, by L. Beikman. Determined by D.D. Kopp. (Jackman).

A LEAFHOPPER (Homalodisca coagulata) - TEXAS - Bexar. (p. 31).

A LEAFHOPPER (Homalodisca insolita) - TEXAS - Bexar. (p. 29).

A NOCTUID MOTH (Rachiplusia ou) - TEXAS - Bexar County= 1 adult collected in wheat field at San Antonio, May 18, 1977, by L. Beikman. Determined by D.M. Weisman. (Jackman).

A PLANT BUG (Trigonotylus ruficornis) - TEXAS - Bexar. (p. 30).

RICE STINK BUG (Oebalus pugnax) - TEXAS - Comal, Liberty, Guadalupe, Wilson, and Ft. Bend. (p. 29).

ROSE SCALE (Aulacaspis rosae) - FLORIDA - Hernando. (p. 32).

SOUTHERN CORN ROOTWORM (Diabrotica undecimpunctata howardi) - TEXAS - Comal. (p. 29).

SOUTHERN FIRE ANT (Solenopsis xyloni) - TEXAS - Childress. (p. 32).

SOUTHERN GREEN STINK BUG (Nezara viridula) - TEXAS - Karnes and Wilson (p. 29) and Comal (p. 30).

SQUASH BUG (Anasa tristis) - TEXAS - Guadalupe and Wilson. (p. 31).

SQUASH VINE BORER (Melittia satyriniformis) - TEXAS - Comal and Karnes. (p. 31).

A STINK BUG (Stiretrus anchorago) - TEXAS - Bexar. (p. 32).

STRIPED CUCUMBER BEETLE (Acalymma vittata) - TEXAS - Guadalupe and Karnes. (p. 31).

SUNFLOWER SPITTLEBUG (Clastoptera xanthocephala) - TEXAS - Bexar County= 1 adult collected on coastal bermudagrass at Universal City, May 26, 1977, by L. Beikman. Determined by B.J. Abraham. (Jackman).

SWEETPOTATO LEAF BEETLE (Typophorus nigritus viridicyaneus) - TEXAS - Karnes County= 2 adults collected on corn in garden at Karnes City, May 16, 1978, by L. Beikman. Determined by E.G. Riley. (Jackman).

VARIEGATED CUTWORM (Peridroma saucia) - TEXAS - Comal. (p. 30).

WATERCRESS SHARPSHOOTER (Draeculacephala mollipes) - TEXAS - Bexar County= 150 adults collected on Coastal bermudagrass at San Antonio, May 26, 1977, by L. Beikman. Determined by D.D. Kopp. (Jackman).

A WEEVIL (Anacentrinus deplanatus) - TEXAS - Guadalupe. (p. 29).

CORRECTIONS

CPPR 3(44-47):622 - A RHOPALOSOMATID WASP (Olixon banksii) - NORTH DAKOTA - "... in rural area, July 28, 1978." should read "... in rural area, July 28, 1976." (Scholl).

CPPR 3(48-52):673 and 684 - SORGHUM MIDGE (Contarinia sorghicola) - TEXAS - Not new, previously reported.

CPPR 3(48-52):680 - SCREWMWORM (Cochliomyia hominivorax) - Last sentence "Total of 616,576,820 sterile flies released...." should read "Total of 685,888,820 sterile flies released...." (Williams, Smith).

CPPR 3(48-52):710 - Under Region, second column, NA Northeastern Area, 6816 Market Street should read 370 Reed Road.

CPPR January 1979 issue, front cover, delete Vol. 3 from top line. Should read 4(1):1-25.

Pest Interceptions of Quarantine Significance at Ports of Entry

Plant Importation and Technical Support Staff
Plant Protection and Quarantine Programs, USDA

<u>Life Stage</u>	<u>Host</u>	<u>Probable Origin</u>	<u>Port of Entry</u>	<u>Desti-nation</u>
<u>Chilo</u> sp. a pyralid moth Det. D.M. Weisman	larval pupal	in <u>Cymbopogon citratus</u> from baggage	Vietnam	Seattle MI
<u>Earias fabia</u> (Stoll) a noctuid moth Det. D.M. Weisman	larval	in okra from baggage	Fiji	Honolulu CA
<u>Epicraerus cognatus</u> Sharp a weevil Det. R. Eads	larval	in tubers of potatoes	Mexico	El Paso CA
<u>Oligotrophus betulae</u> (Winnertz) a gall midge Det. F. Krim	larval	in seeds of <u>Betula pendula</u> from mail	Soviet Union	Hoboken MT
<u>Pieris</u> sp. a pierid butterfly Det. D.M. Weisman	pupal	on vans of household goods	Italy	New Orleans IL
<u>Pityogenes bistridentatus</u> (Eichhoff) a scolytid beetle Det. D.M. Anderson	larval adult	in wood crates with machinery	Spain	New York IL
<u>Taphrorychus</u> sp. a scolytid beetle Det. D.M. Anderson	larval adult	in wood crates with machinery	West Germany	Savannah GA
<u>Xyleborus validus</u> Eichhoff a scolytid beetle Det. D.M. Anderson	adult	in Dunnage	Japan	San Francisco CA

METRIC CONVERSION

1 cm = 0.393701 in
1 m = 3.28084 ft = 1.09361 yd
1 km = 0.621371 mile
1 sq cm = 0.155000 sq in
1 sq m = 10.7639 sq ft = 1.19599 sq yd
1 ha = 2.47105 acres
1 sq km = 0.386102 sq mile
1 cu m = 423.776 ft
1 liter = 0.0283784 bu
1 kg = 2.20462 lb
1 mt (metric ton) = 1.10231 short ton
1 kg/ha = 0.892179 lb/acre = 0.00892179 cwt/acre
1 mt/ha = 0.446089 ton/acre

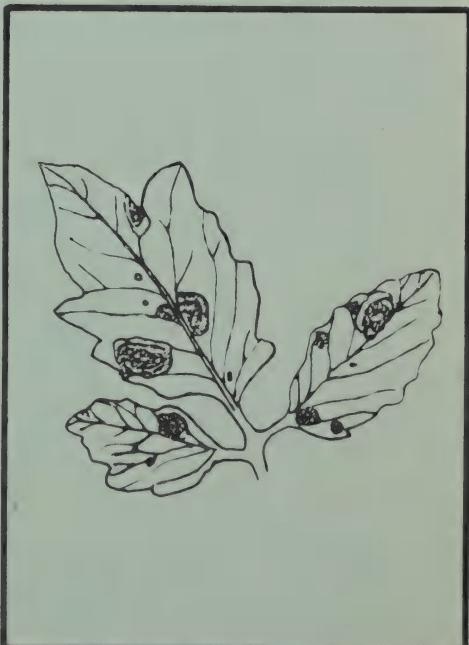
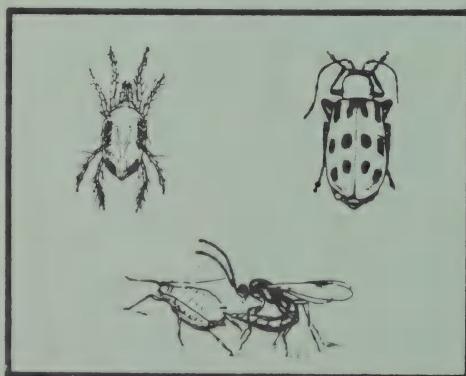
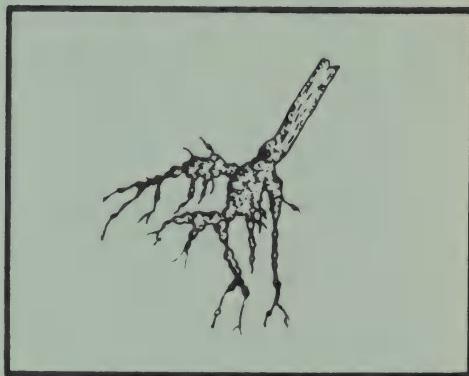
UNITED STATES DEPARTMENT OF AGRICULTURE
Animal and Plant Health Inspection Service
Hyattsville, Maryland 20782

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Cooperative PLANT PEST REPORT

PROCUREMENT
CURRENT SET

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Animal
and Plant
Health
Inspection
Service

U.S.
DEPARTMENT
OF AGRICULTURE



This publication is distributed weekly to Federal and State agencies, universities, farmers, and others interested in containing or controlling pests in the United States.

Data included in this publication are compiled from reports submitted by cooperating State, Federal and other agricultural and industrial specialists. Accuracy of the reports is not verified prior to publication.

Cooperative Plant Pest Report supersedes *Cooperative Economic Insect Report*, which was discontinued with Volume 25, Numbers 49-52, 1975.

Correspondence should be directed to:

CPPR

New Pest Detection and Survey Staff
Plant Protection and Quarantine Programs
Animal and Plant Health Inspection Service
U.S. Department of Agriculture
Federal Building #1
Hyattsville, Maryland 20782

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COOPERATIVE PLANT PEST REPORT

HIGHLIGHTS

Detection

An APHID is new for Oregon. (p. 40).

For new county records see page 41.

Special Reports

State Survey Coordinators. (p. 43-46).

Cooperative Survey Entomologists. (p. 47-49).

Cooperative Survey Plant Pathologists. (p. 50).

Reports in this issue are for the week ending February 2 unless otherwise indicated.

CONTENTS

Small Grains Insects.....	39	Deciduous Fruits and Nuts Insects.....	39
Forage Legumes Insects.....	39	Citrus Insects.....	40
Potatoes, Tomatoes, Peppers Insects.....	39	Ornamentals Insects.....	40
Federal and State Programs Insects.....	40		
Hawaii Pest Report.....	40		
Detection.....	41		
Corrections.....	41		
Light Trap Collections.....	41		
Pest Interceptions of Quarantine Significance at Ports of Entry.....	42		
State Survey Coordinators.....	43		
Cooperative Survey Entomologists.....	47		
Cooperative Survey Plant Pathologists.....	50		

SMALL GRAINS

INSECTS

RICE STINK BUG (Oebalus pugnax) - TEXAS - New county record. Wharton County= 2 adults collected in rice field at East Bernard, June 7, 1978, by C.H. May. Determined by S. Fishman. (Jackman).

FORAGE LEGUMES

INSECTS

ALFALFA WEEVIL (Hypera postica) - KANSAS - County= egg averages per stem of alfalfa [average stem length in cm] December 19 and 21, 1978, and January 31, 1979: Douglas= 0.16 [33], Lyon= 0 [30] and 0 [36], Coffey= 0 [41], Johnson= 0 [30], Miami= 0 [46] and 0 [46], Anderson= 0 [46], Allen= 0 [33], Bourbon= 0 [33] and 0 [23], and Riley= 0.56 [25]. (White, Bell).

CLOVER STEM BORER (Languria mozardi) - OKLAHOMA - New county records. District> County= collection data. NW> Woodward= on alfalfa at Mutual, September 15, 1966. SW> Greer= on alfalfa at Hester, August 25, 1964. C> Grady on yellow sweetclover at Tuttle, May 13, 1975; Lincoln= on vetch at Stroud, May 15, 1973; McClain= on dock at Payne, May 17, 1966; Seminole= on alfalfa at Little, April 2, 1976. NE> Craig= on yellow sweetclover at Big Cabin, June 3, 1971. EC> Adair= on alfalfa at Baron, May 13, 1969; Creek yellow= on sweetclover at Bristol, May 17, 1973. Muskogee= on alfalfa at Braggs, April 21, 1965, Okmulgee= on yellow sweetclover at Okmulgee Lake, May 6, 1971. SC> Bryan= on a weed (scientific name unavailable) at Kenefic, May 18, 1966. All collected and determined by D.C. Arnold. (Arnold).

POTATOES, TOMATOES, PEPPERS

INSECTS

A TEPHRITID FLY (Rhagoletis striatella) - MICHIGAN - New county record. Wayne County= 1 adult female collected from various garden vegetables in garden in Canton Township, July 10, 1978, by W.E. Wille. Determined by E.R. Hoebeke; confirmed by R.H. Foote. (Hoebeke).

DECIDUOUS FRUITS AND NUTS

INSECTS

WINTER MOTH (Operophtera brumata) - OREGON - Adult survey in greater Portland area completed. Multnomah, Washington, and Clackamas Counties= 650+ sites examined using beating sheets and banding host tree trunks with sticky traps. Infested area about 500 sq km and extends from Hillsboro west to Gresham and from Columbia River south to Sherwood, Lake Oswego, and north Clackamas. Female moths beaten from or trapped on apple, flowering plum, cherry (fruit and flowering), crabapple, pear, elm, maple, mountain ash, dogwood, filbert, birch, and rhododendron. (Penrose et al.).

PEAR PSYLLA (Psylla pyricola) - CALIFORNIA - Lake County= low and high counts per 50 beats of pear trees January 15-19: 8 and 17 at Scotts Valley, 0 and 60 at Upper Lake, and 0 and 25 at Big Valley. (E. Burger, Hawkins).

CITRUS

INSECTS

CALIFORNIA RED SCALE (Aonidiella aurantii) - CALIFORNIA - Fresno County= 20 gravid females per fruit on commercial citrus in Sanger area. (Dunnegan).

ORNAMENTALS

INSECTS

AN APHID (Macrosiphoniella tanacetaria) - OREGON - New State record. Polk County= heavy on upper stems of Tanacetum vulgare (tansy) in park, near Salem, July 15, 1978. Collected and determined by R.L. Westcott. (Penrose).

AN APHID (Ctenocallis setosus) - CALIFORNIA - New county record. Santa Clara County= collected on ornamental Cytisus scoparius (Scotch broom) at Saratoga, November 3, 1978, by A. Taylor and D. Zadiz. Determined by T. Kono. (Gill).

FEDERAL AND STATE PROGRAMS

INSECTS

SCREWWORM (Cochliomyia hominivorax) - No cases were reported from continental United States January 7-13. (Meadows). Total of 1,341 cases reported in Mexico south of Barrier Zone November 19 to December 2. (Williams, Smith). Number of sterile flies released January 7-13 totaled 92,664,200 as follows: Texas 64,931,200; Arizona 27,013,000; California 720,000. (Meadows). Total of 203,316,800 sterile flies released within Barrier of Mexico. (Williams, Smith).

HAWAII PEST REPORT

General Vegetables - GREENHOUSE WHITEFLY (Trialeurodes vaporariorum) moderate to heavy on 0.10 ha of bitter melon in Waianae Valley and 0.10 ha of eggplant at Lualualei, Oahu. ONION THrips (Thrips tabaci) infestation and damage heavy on 0.10 ha of green onion at Lualualei. (L. Nakahara).

Man and Animals - Heavy adult swarming of a CERATOPOGONID FLY (Forcipomyia ingrami) in Makalapa area of Oahu annoyed residents. Problems also reported at Diamond Head and Waikiki. (Higa et al.).

DETECTION

NEW STATE RECORD

INSECTS

AN APHID (Macrosiphoniella tanacetaria) - OREGON - Polk County. (p. 40).

NEW COUNTY RECORDS

INSECTS

AN APHID (Ctenocallis setosus) - CALIFORNIA - Santa Clara. (p. 40).

CLOVER STEM BORER (Languria mozardi) - OKLAHOMA - Woodward, Greer, Grady, Lincoln, McClain, Seminole, Craig, Adair, Creek, Muskogee, Okmulgee, and Bryan. (p. 39).

RICE STINK BUG (Oebalus pugnax) - TEXAS - Wharton. (p. 39).

A TEPHRITID FLY (Rhagoletis striatella) - MICHIGAN - Wayne. (p. 39).

CORRECTIONS

CPPR 4(1):18 - Ustilago scitaminea - change Hendry under county heading to Palm Beach.

LIGHT TRAP COLLECTIONS

ARIZONA - Mesa, 1/22-28, BL - ARMY CUTWORM (Pseudaletia unipuncta) 1.

Pest Interceptions of Quarantine Significance at Ports of Entry

Plant Importation and Technical Support Staff
Plant Protection and Quarantine Programs, USDA

<u>Life Stage</u>	<u>Host</u>	<u>Probable Origin</u>	<u>Port of Entry</u>	<u>Desti-nation</u>
<u>Cryptoblabes gnidiella</u> (Milliére) <u>Christmas berry webworm</u> Det. D. Walters	larval	in pomegranate from baggage	Italy	Kennedy Airport NJ
<u>Cryptophlebia leucotreta</u> (Meyrick) <u>an Olethreutid moth</u> Det. D.M. Odematt	larval	in corn from baggage	Africa	Kennedy Airport NY
<u>Euscepes postfasciatus</u> (Fairmaire) <u>West Indian Sweetpotato weevil</u> Det. D.M. Anderson	larval	in tubers of sweet-potatoes from baggage	Hawaii	Honolulu CA
<u>Fiorinia pinicola</u> Maskell <u>an armored scale</u> Det. S. Nakahara	adult	on leaves of <u>Podocarpus</u> from baggage	Japan	Honolulu HI
<u>Metamasius</u> sp. <u>a weevil</u> Det. R.P. Higgins	larval	in bulbs of orchids from cargo	Mexico	Miami FL
<u>Helicella conspurcata</u> (Draparnaud) <u>a helicid snail</u> Det. R. Munkittrick	adult	on vans of military household goods	Greece	Houston TX
<u>Succinea horticola</u> Reinhardt <u>a succineid snail</u> Det. R. Munkittrick	juvenile	on <u>Pinus densiflora</u> plants from cargo	Japan	Beltsville MD
<u>Ditylenchus dipsaci</u> (Kuhn) <u>stem and bulb nematode</u> Det. W. Friedman	adult	in seeds of <u>Vicia faba</u> from cargo	Italy	Kennedy Airport --

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METRIC CONVERSION

1 cm = 0.393701 in
1 m = 3.28084 ft = 1.09361 yd
1 km = 0.621371 mile
1 sq cm = 0.155000 sq in
1 sq m = 10.7639 sq ft = 1.19599 sq yd
1 ha = 2.47105 acres
1 sq km = 0.386102 sq mile
1 cu m = 423.776 ft
1 liter = 0.0283784 bu
1 kg = 2.20462 lb
1 mt (metric ton) = 1.10231 short ton
1 kg/ha = 0.892179 lb/acre = 0.00892179 cwt/acre
1 mt/ha = 0.446089 ton/acre

UNITED STATES DEPARTMENT OF AGRICULTURE
Animal and Plant Health Inspection Service
Hyattsville, Maryland 20782

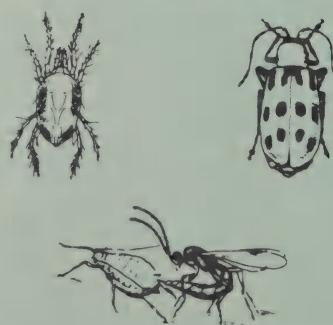
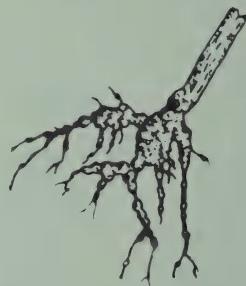
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February 16, 1979

Cooperative PLANT PEST REPORT



Animal
and Plant
Health
Inspection
Service

U.S.
DEPARTMENT
OF AGRICULTURE

This publication is distributed weekly to Federal and State agencies, universities, farmers, and others interested in containing or controlling pests in the United States.

Data included in this publication are compiled from reports submitted by cooperating State, Federal and other agricultural and industrial specialists. Accuracy of the reports is not verified prior to publication.

Cooperative Plant Pest Report supersedes *Cooperative Economic Insect Report*, which was discontinued with Volume 25, Numbers 49-52, 1975.

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COOPERATIVE PLANT PEST REPORT

HIGHLIGHTS

Detection

AFRICAN BOXTHORN in California is new for North America. (p. 56).

New State records include an APHID in New Hampshire and an ERIOPHYID MITE in California. (p. 54).

For new county records see page 56.

An unidentified RHABDOVIRUS on sorghum in California. (p. 53).

Reports in this issue are for the week ending February 9 unless otherwise indicated.

CONTENTS

Corn, Sorghum, Sugarcane Diseases.....	53	Deciduous Fruits and Nuts Insects.....	53
Small Grains Insects.....	53	Citrus Insects.....	54
Turf, Pastures, Rangeland Insects.....	53	Ornamentals Insects.....	54
Sugar Beets Insects.....	53	Forest and Shade Trees Insects.....	54
Cole Crops Diseases.....	53	Stored Products Insects.....	54
General Vegetables Insects.....	53		
Federal and State Programs Insects.....	55		
Hawaii Pest Report.....	55		
Detection.....	56		
Corrections.....	56		
Light Trap Collections.....	55		
Pest Interceptions of Quarantine Significance at Ports of Entry.....	57		
Revised page 15 of Pest Detection in the United States - 1978. Last page.			

CORN, SORGHUM, SUGARCANE

DISEASES

A RHABDOVIRUS - CALIFORNIA - New unidentified rhabdovirus on cereals in State. Imperial County= found on Sorghum sp. in experiment station at El Centro by R. Flock and D. Mayhew, August 30, 1978. Determined by D. Mayhew. LEAFHOPPERS (Exitianus picatus and Deltacephalus sonorus) possible vectors. Transmitted to corn and sorghum to date. (Robbins).

SMALL GRAINS

INSECTS

GREENBUG (Schizaphis graminum) - TEXAS - County= maximum per 0.3 row m of small grains: Baylor= 30 and Archer= 30. Mean per 0.3 row m of small grains: Foard= 10-40 and Wilbarger= 2-19. (Boring).

AN APHID (Rhopalosiphum padi) - TEXAS - County= maximum per 0.3 row m of small grains: Archer= 30, Baylor= 22, and Wilbarger= 49. (Boring).

TURF, PASTURES, RANGELAND

INSECTS

ARMYWORM (Pseudaletia unipuncta) - SOUTH CAROLINA - Colleton County= moderately infested Coastal bermudagrass near Walterboro. No treatments applied. Under observation for possible crossover into small grains or other crops. (Yates).

SUGAR BEETS

INSECTS

PEA APHID (Acyrthosiphon pisum) - ARIZONA - Maricopa County= nymphs 150 and adults 80 per 100 sweeps of sugar beets at Buckeye. (Roney).

COLE CROPS

DISEASES

CRUCIFER DOWNY MILDEW (Peronospora parasitica) - CALIFORNIA - Santa Barbara and Ventura Counties= very severe on broccoli and cauliflower. (Robbins).

GENERAL VEGETABLES

INSECTS

CORN EARWORM (Heliothis zea) - ARIZONA - Maricopa County= larvae at economic damaging levels on lettuce at Tolleson. (Roney, Evans).

DECIDUOUS FRUITS AND NUTS

INSECTS

PEAR PSYLLA (Psylla pyricola) - CALIFORNIA - Lake County= low and high counts per 50 beats of pear trees January 22-26: 0 and 39 at Scotts Valley, 0 and 20 at Upper Lake, and 0 and 58 at Big Valley. (E. Burger, Hawkins).

CITRUS

INSECTS

WOOLLY WHITEFLY (Aleurothrixus floccosus) - CALIFORNIA - New county record. Ventura County= 80 per leaf (all stages) collected on Citrus limon (lemon) at residence at Camarillo, December 5, 1978, by G. Peters, D. Buettner, and K. Weiss. Determined by R.J. Gill. (Gill).

ORNAMENTALS

INSECTS

AN APHID (Masonaphis lambersi) - NEW HAMPSHIRE - New State record. Strafford County= collected on Rhododendron sp. (a rhododendron) from nursery at Madbury, August 1, 1978, by A.H. Mason. Determined by M.B. Stoetzel. (Mason et al.).

A WHITEFLY (Parabemisia myricae) - CALIFORNIA - New county records. Fresno County= collected on Gardenia sp. (a gardenia) in nursery at Fresno, December 5, 1978, by R. Kassabian and C. Francone. San Diego County= collected on Gardenia sp. in nursery at La Jolla, December 11, 1978, by R. Walsh. Kern County= collected on Gardenia jasminoides (Cape-jasmine) in nursery at Bakersfield, Oildale, and Delano, December 4, 1978, by D. Poore and D.S. Daoud. All determined by R.J. Gill. (Gill).

FOREST AND SHADE TREES

INSECTS

FALL WEBWORM (Hyphantria cunea) - TEXAS - New county records. Maverick County= 8 larvae collected on mulberry, June 8, 1975, 9 larvae on mulberry, June 10, and 1 adult on fencepost at Quemado, June 29 by R.G. Jones. All determined by R.G. Jones and R.L. Hodgdon. Larval identification confirmed by D.M. Weisman and adult confirmed by E.L. Todd. Webb County= 8 larvae collected on Fraxinus velutina var. glabra (Arizona ash) at Laredo, April 17, 1973, by J.A. Palmer. Determined by D.M. Weisman. Subsequent collections, 3 larvae, near Laredo in 1974 (exact date unknown) on Fraxinus and Malus by D.A. Gutierrez. Determined by R.L. Hodgdon and D.M. Weisman. (Jackman).

AN ERIOPHYID MITE (Phantacrus lobatus) - CALIFORNIA - New State record. Mendocino County= collected from Pseudotsuga menziesii (Douglas-fir) needles at residence at Comptche, December 3, 1978, by T. Kono and F. Andrews. Determined by T. Kono. (Kono).

AN ERIOPHYID MITE (Trisetacus pseudotsugae) - CALIFORNIA - New county record. Mendocino County= collected from Pseudotsuga menziesii (Douglas-fir) needles at residence at Mendocino, December 2, 1978, by T. Kono and F. Andrews. Determined by T. Kono. (Kono).

STORED PRODUCTS

INSECTS

RICE WEEVIL (Sitophilus oryzae) - NORTH CAROLINA - Coastal Plain> infestations heavy in several large farm storage feed mills in central area, 5 per L common during January. (Hunt).

FEDERAL AND STATE PROGRAMS

INSECTS

SCREWWORM (*Cochliomyia hominivorax*) - No cases reported from continental United States January 14-20. (Meadows). Total of 1,369 cases confirmed in portion of Barrier Zone in Republic of Mexico December 3-30. Total of 1,457 cases reported in Mexico south of Barrier Zone December 3 to January 6. (Williams, Smith). Number of sterile flies released January 14-20 totaled 51,328,000 as follows: Texas 23,093,000; Arizona 20,639,000; California 7,596,000. (Meadows). Total of 122,797,400 sterile flies released within Barrier of Mexico. (Williams, Smith).

HAWAII PEST REPORT

Ornamentals - KOU LEAFWORM (*Ethmia colonella*) defoliation light to severe (100%) on 24 Cordia subcordata (kou) trees at Kihei, Maui. Pupae and pupal cases heavy; Larvae few. (Miyahira, L. Nakahara).

Beneficial Insects - LANTANA LACE BUG (Teleonemia scrupulosa) infestations and defoliation heavy on lantana in pastures along 23-km stretch from Ulupalakua to Nuu, Maui. Terminal dieback evident on lantana observed, possibly due to stress by beneficial insects and droughtlike conditions for past couple of years. Die-back to root system in some cases; recovery probable in others. Infestations by a TINGID BUG (Leptobyrsa decora) heavy at Ulupalakua. Defoliation by LANTANA DEFOLIATOR CATERPILLAR (Hypena strigata) spotty but heavy on roadside lantana at Puuanahulu, Hawaii Island. (Miyahira et al.).

LIGHT TRAP COLLECTIONS

TEXAS - College Station, 1/25 to 2/7, PL - ARMYWORM (*Pseudaletia unipuncta*) 0, BLACK CUTWORM (*Agrotis ipsilon*) 0, CABBAGE LOOPER (*Trichoplusia ni*) 0, CORN EARWORM (*Heliothis zea*) 0, FALL ARMYWORM (*Spodoptera frugiperda*) 0, SALT MARSH CATERPILLAR (*Estigmene acrea*) 0, TOBACCO BUDWORM (*H. virescens*) 0, TOBACCO HORNWORM (*Manduca sexta*) 0, TOMATO HORNWORM (*M. quinquemaculata*) 0, YELLOW-STRIPED ARMYWORM (*S. ornithogalli*) 0.

DETECTION

NEW NORTH AMERICAN RECORD

WEEDS

AFRICAN BOXTHORN (Lycium ferocissimum Miers) - CALIFORNIA - Los Angeles County= 2 live plants and 3 dead plants found in salt marsh at Playa Del Rey, September 12, 1978, by D. Verity. Determined by T.C. Fuller. Largest plant appears as old as cultivated plant (about 40 years old) in arboretum at San Francisco. Prominent spines 10 cm long formed on the cultivated plant each year. Only known location for this species in State other than in San Francisco. Considered a noxious weed in Australia. (Robbins). Native to South Africa and occurs in New Zealand. (Terrell).

NEW STATE RECORDS

INSECTS

AN APHID (Masonaphis lambersi) - NEW HAMPSHIRE - Strafford County. (p. 54).

AN ERIOPHYID MITE (Phantacrus lobatus) - CALIFORNIA - Mendocino County. (p. 54).

NEW COUNTY RECORDS

INSECTS

AN ERIOPHYID MITE (Trisetacus pseudotsugae) - CALIFORNIA - Mendocino. (p. 54).

FALL WEBWORM (Hyphantria cunea) - TEXAS - Maverick and Webb. (p. 54).

TEXAS LEAFCUTTING ANT (Atta texana) - TEXAS - Maverick County= 2 adults collected at lights June 20, 1975, and 2 on June 21 by R.G. Jones. Determined by R.G. Jones, R.L. Hodgdon, and D.R. Smith. (Jackman).

A WHITEFLY (Parabemisia myricae) - CALIFORNIA - Fresno, Kern, and San Diego. (p. 54).

WOOLLY WHITEFLY (Aleurothrixus floccosus) - CALIFORNIA - Ventura. (p. 54).

WEEDS

RUSSIAN KNAPEWEEED (Centaurea repens) - CALIFORNIA - Tuolumne County= specimen collected near Strawberry, October 4, 1978, by E. Paddock and R. Bingham. Determined by G.D. Barbe. (Hass).

CORRECTIONS

CPPR 4(1):15 - PEST DETECTION IN THE UNITED STATES - 1978 - Page 15 corrected on last page of this issue (volume 4, number 4).

Pest Interceptions of Quarantine Significance at Ports of Entry

Plant Importation and Technical Support Staff
Plant Protection and Quarantine Programs, USDA

<u>Life Stage</u>	<u>Host</u>	<u>Probable Origin</u>	<u>Port of Entry</u>	<u>Desti-nation</u>
<u><i>Coniothyrium atriplicinum</i> Wint.</u> a fungus Det. F. Matthews	imperfect	on seeds of <u><i>Atriplex</i></u> from cargo	Chile	Los Angeles CA
<u><i>Cnaphalocrocis medinalis</i> (Guenée)</u> a pyraliid moth Det. F. Rothgery	adult	with cargo in air-craft	Japan	Anchorage CA
<u><i>Conotrachelus</i> sp.</u> a weevil Det. B.K. Dozier	larval	in <u><i>Psidium</i></u> fruit from baggage	Mexico	Calexico CA
<u><i>Epinotia aporema</i> (Walsingham)</u> an olethreutiid moth Det. H.A. McKinney	larval	in string beans from stores	Japan	Seattle --
<u><i>Hylastes ater</i> (Paykull)</u> a scolytid beetle Det. E.J. Ford, Jr.	adult	in wood crates with castings	Portugal	Baltimore MD
<u><i>Leucinodes orbonalis</i> (Guenée)</u> eggplant fruit borer Det. D.M. Weisman	larval	in eggplant from baggage	Ghana	Dulles USA
<u><i>Metamasius callizona</i> (Chev.)</u> a weevil Det. D.R. Whitehead	adult	on <u><i>Tillandsia</i></u> plants from baggage	Mexico	Brownsville TX
<u><i>Achatina fulica</i> Bowdich</u> giant African snail Det. S. Jordon	juvenile	on container vans with scrap metal	Guam	San Francisco CA

PEST DETECTION IN THE UNITED STATES - 1978

There were 25 new United States records reported in the "Cooperative Plant Pest Report" during 1978. These records included 18 insects, 4 diseases, 2 weeds, and 1 slug. Nine pests were reported for the first time on the North American continent--5 in California, 2 in Puerto Rico, 1 in Delaware, and 1 in Maine. None of the species reported in Hawaii or Puerto Rico is known from the continental United States. There were 57 new State distribution records, 7 Puerto Rican records, and 4 U.S. Virgin Island records of species known to occur in the U.S.--6 diseases, 61 insects and ticks, and 1 weed.

NEW UNITED STATES RECORDS

<u>State & Other</u>	<u>County</u>	<u>Probable Origin</u>	<u>Collected on</u>	<u>CPPR Page</u>	<u>Economic Importance</u>
<i>Aethus nigritus</i> (Fabricius) a cydnid bug 1/ Det. E.R. Hoebeke; conf. R. Froeschner	DE New Castle	Palearctic, Oriental Region	soybeans	376	Probably noneconomic
<i>Blatta lateralis</i> (Walker) a cockroach 1/ Det. A.B. Gurney	CA San Joaquin	Africa, Asia, Soviet Union	Mess facilities and 1 or more warehouses of houses of army depot	295	Economic
<i>Coloradoa tanacetina</i> (Walker) an aphid 1/ Det. C.F. Smith	ME Penobscot	Europe	<i>Tanacetum vulgare</i>	89	Probably noneconomic
<i>Duplaspidiotus fassor</i> (Newstead) a diaspidid scale 3/ Det. S. Nakahara	PR -	Barbados, Brazil, Mexico	<i>Ficus</i> sp.	11	Unknown
<i>Enydra martima</i> (Humboldt, Bonpland, and Kunth) de Candoile a composite 3/ Det. H. St. John	HI Oahu	Pacific coast of tropical South America	-	130	Probably noneconomic

METRIC CONVERSION

1 cm = 0.393701 in
1 m = 3.28084 ft = 1.09361 yd
1 km = 0.621371 mi
1 sq cm = 0.155000 sq in
1 sq m = 10.7639 sq ft = 1.19599 sq yd
1 ha = 2.47104 acres
1 sq km = 0.386101 sq mi
1 kg = 2.20462 lb
1 t (metric ton) = 1.10231 short ton
1 kg/ha = 0.892183 lb/acre
1 t/ha = 0.446091 ton/acre

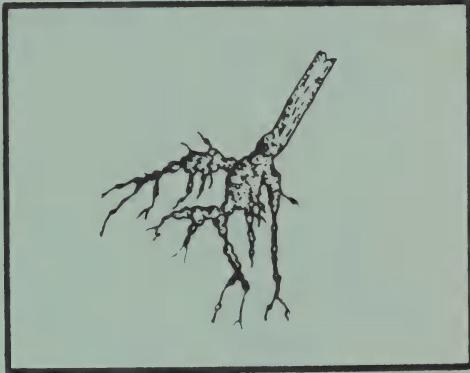
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Hyattsville, Maryland 20782

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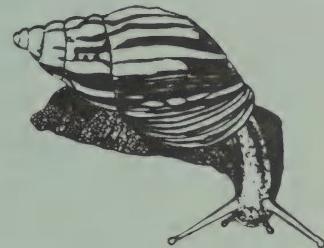
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4(5-6):59-68

March 2, 1979

Cooperative PLANT PEST REPORT



Animal
and Plant
Health
Inspection
Service

U.S.
DEPARTMENT
OF AGRICULTURE

This publication is distributed weekly to Federal and State agencies, universities, farmers, and others interested in containing or controlling pests in the United States.

Data included in this publication are compiled from reports submitted by cooperating State, Federal and other agricultural and industrial specialists. Accuracy of the reports is not verified prior to publication.

Cooperative Plant Pest Report supersedes *Cooperative Economic Insect Report*, which was discontinued with Volume 25, Numbers 49-52, 1975.

Correspondence should be directed to:

CPPR

New Pest Detection and Survey Staff
Plant Protection and Quarantine Programs
Animal and Plant Health Inspection Service
U.S. Department of Agriculture
Federal Building #1
Hyattsville, Maryland 20782

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COOPERATIVE PLANT PEST REPORT

HIGHLIGHTS

Current Conditions

Controls required for CORN EARWORM in southern area of Florida and for DIAMONDBACK MOTH in northern sections. (p. 63).

CRUCIFER DOWNY MILDEW very serious on cole crops in southern California. (p. 63).

Detection

● New Western Hemisphere records include a LYGAEID BUG and a TENEBRIONID BEETLE in Hawaii. (p. 66).

● A MEALYBUG in Florida is new to the continental United States. (p. 64).

New State records include a NOCTUID MOTH in Oregon (p. 62) and CABBAGE SEEDPOD WEEVIL in Tennessee (p. 63).

For new county records see page 67.

Reports in this issue are for the weeks ending February 16 and 23 unless otherwise indicated.

CONTENTS

Corn, Sorghum, Sugarcane	
Insects.....	61
Small Grains	
Insects.....	61
Forage Legumes	
Diseases.....	61
Insects.....	61
Soybeans	
Diseases.....	62
Insects.....	62
Cotton	
Diseases.....	62
Miscellaneous Field Crops	
Insects.....	62
Potatoes, Tomatoes, Peppers	
Insects.....	62
Beans and Peas	
Insects.....	63
Beneficial Organisms and Their Enemies	
Insects.....	65
Federal and State Programs	
Insects.....	65
Hawaii Pest Report.....	66
Detection.....	66
Light Trap Collections.....	65
Pest Interceptions of Quarantine Significance at Ports of Entry.....	68
Cole Crops	
Diseases.....	63
Insects.....	63
General Vegetables	
Insects.....	63
Deciduous Fruits and Nuts	
Diseases.....	63
Ornamentals	
Diseases.....	63
Forest and Shade Trees	
Insects.....	64
Man and Animals	
Insects.....	64
Stored Products	
Insects.....	64

CORN, SORGHUM, SUGARCANE

INSECTS

A CURCULIONID BEETLE (Anacentrinus deplanatus) - TEXAS - New county records. Karnes County= 1 adult collected on corn in garden at residence at Karnes City, May 16, 1978. Wilson County= 1 specimen collected in sorghum field, no city available, May 2, 1978. Both collected by L. Beikman and determined by B.J. Abraham. (J.A. Jackman).

CONCHUELA (Chlorochroa ligata) - TEXAS - New county record. Medina County= 3 adults collected from sorghum on farm 3 km east of Hondo by N.M. Moritz, July 26, 1978. Determined by R.L. Hodgdon. (J.A. Jackman).

SMALL GRAINS

INSECTS

GREENBUG (Schizaphis graminum) - TEXAS - County= maximum counts per 0.3 row m of wheat in Panhandle area January 22 to February 5: Parmer= 100, Hale= 30, Oldham= 1, Deaf Smith= 10, Castro= 1, Randall= 1, Potter= 1, Swisher= 10, Briscoe= 0, Hall= 5, Floyd= 0, Hutchinson= 0, Hansford= 0, Ochiltree= 0, Sherman= 1, and Moore= 0. (N.E. Daniels).

RICE STINK BUG (Oebalus pugnax) - TEXAS - New county records. Medina County= 12 adults collected on small grains on farm south of Hondo, July 18, 1977, by N.M. Moritz. Wilson County= 100 adults collected in wheat field 16 km west of Floresville, May 11, 1978, by L. Baesler and N.M. Moritz. Both determined by R.L. Hodgdon. (J.A. Jackman).

LEAFFOOTED BUG (Leptoglossus phyllopus) - TEXAS - New county record. Medina County= 50 adults collected on small grains on farm 3 km northeast of Hondo, July 18, 1977, by N.M. Moritz. Determined by B.J. Abraham. (J.A. Jackman).

FORAGE LEGUMES

DISEASES

ALFALFA DOWNTY MILDEW (Peronospora trifoliorum) - CALIFORNIA - Imperial County= serious outbreak on alfalfa cv. Moapa 69 and U.C. Cargo in Imperial Valley week of February 20. (R.T. Robbins).

INSECTS

ALFALFA WEEVIL (Hypera postica) - TEXAS - New county record. Comal County= 2 adults collected on clover, no city available, May 8, 1978, by L. Beikman. Determined by B.J. Abraham. (J.A. Jackman).

BLUE ALFALFA APHID (Acyrthosiphon kondoi) - KANSAS - New county record. Marion County= collected on alfalfa on farm at Lehigh, May 23, 1978. Collected and determined by B.D. Hilbert. (B.D. Hilbert, K.O. Bell, Jr.).

SOYBEANS

DISEASES

SOYBEAN CYST NEMATODE (*Heterodera glycines*) - TENNESSEE - New county records taken on soybeans in 1977. Collected by P.D. Foster. Determined by R.E. Harrison. (C.D. Gordon).

<u>County</u>	<u>Nearest City</u>	<u>Date</u>
Cheatham	Pleasant View	Aug 9
Giles	Tarpley	Aug 9
Hickman	Centerville	Aug 18
Lewis	Riverside	Aug 19
Macon	Haysville	Sep 21
Montgomery	Hampton Station	Aug 26
Robertson	Mitchell	Aug 24
Williamson	Arrington	Jul 22

INSECTS

SOUTHERN GREEN STINK BUG (*Nezara viridula*) - TEXAS - New county record. Wilson County= adult collected on soybeans on farm 2 km southwest of Poth, September 26, 1978, by O.H. Barham. Determined by R.L. Hodgdon. (J.A. Jackman).

COTTON

DISEASES

A ROOT KNOT NEMATODE (*Meloidogyne* sp.) - NEW MEXICO - Dona Ana County= moderate in several cotton fields at Anthony week ending February 16. (Stefano).

MISCELLANEOUS FIELD CROPS

INSECTS

A NOCTUID MOTH (*Stibadium spumosum*) - OREGON - New State record. Grant County= adults collected from *Helianthus annuus* (sunflower) at John Day, July 27, 1962. Determined by W.R. Bauer and J.S. Buckett. New county record. Gilliam County= larvae collected from heads of *H. annuus* along Interstate Highway 80N, 16.4 km east of John Day River, July 30, 1978. Determined by T.D. Eichlin. Both collected by R.L. Westcott. (R.L. Westcott).

POTATOES, TOMATOES, PEPPERS

INSECTS

COLORADO POTATO BEETLE (*Leptinotarsa decemlineata*) - TEXAS - New county records. Bexar County= 12 adults collected on potatoes 1 km south of Maurermann at residence at San Antonio, June 7, 1977, by N.M. Moritz. Determined by B.J. Abraham. Wilson County= 2 adults collected on potatoes at residence at Floresville, May 11, 1977, by L. Baesler and N.M. Moritz. Determined by R.L. Hodgdon. (J.A. Jackman).

A CHRYSOMELID BEETLE (*Disonycha glabrata*) - TEXAS - New county record. Wilson County= 20 adults collected on potatoes at residence at Floresville, May 11, 1978, by L. Baesler and N.M. Moritz. Determined by E.G. Riley. (J.A. Jackman).

BEANS AND PEAS

INSECTS

CORN EARWORM (Heliothis zea) - FLORIDA - Dade County= damage economic to 80.9 ha of bush beans in Homestead area, week ending February 9. Controls required. (F.W. Mead).

COLE CROPS

DISEASES

CRUCIFER DOWNY MILDEW (Peronospora parasitica) - CALIFORNIA - Imperial County= very serious and widespread on broccoli, cauliflower, and cabbage in Imperial Valley week of February 20. (R.T. Robbins).

INSECTS

CABBAGE SEEDPOD WEEVIL (Ceutorhynchus assimilis) - TENNESSEE - New State record. Bradley County= damaged broccoli and cabbage at Cleveland, May 25, 1977. Collected by H.E. Williams. Determined by D.R. Whitehead. (C.D. Gordon).

DIAMONDBACK MOTH (Plutella xylostella) - FLORIDA - St. Johns County= populations above economic threshold on cabbage in Hastings area. Controls required week of February 15. (R.B. Workman).

HARLEQUIN BUG (Murgantia histrionica) - TEXAS - New county record. Bexar County= 5 adults collected on turnips 1 km south of Mauremann at San Antonio, June 7, 1977, by N.M. Moritz. Determined by B.J. Abraham. (J.A. Jackman).

GENERAL VEGETABLES

INSECTS

YELLOWSTRIPED ARMYWORM (Spodoptera ornithogalli) - TEXAS - New county record. Bexar County= larva collected on carrots at residence at San Antonio, May 19, 1977, by N.M. Moritz. Determined by R.L. Hodgdon. (J.A. Jackman).

SPOTTED BEET WEBWORM (Hymenia perspectalis) - TEXAS - New county record. Bexar County= specimen collected on spinach in garden at Southton, May 26, 1978, by L. Beikman. Determined by D.M. Weisman. (J.A. Jackman).

DECIDUOUS FRUITS AND NUTS

DISEASES

PEAR PSYLLA (Psylla pyricola) - CALIFORNIA - Lake County= low and high counts per 50 beats of pear trees January 29 to February 2: 0 and 12 at Scotts Valley, 0 and 14 at Upper Lake, and 0 and 34 at Big Valley. (E. Burger, L. Hawkins).

ORNAMENTALS

INSECTS

A DIASPIDID SCALE (Comstockiella sabalis) - FLORIDA - New county record. Franklin County= infested leaves of Sabal sp. near Apalachicola, February 14, 1979. Collected by J.T. Felty and K.C. Lowery. Determined by A.B. Hamon. (F.W. Mead).

TEA SCALE (*Fiorinia theae*) - FLORIDA - New county record. Hamilton County= adults moderately infested leaves and stems of 2 *Euonymus japonica* (spindle tree) in park at Jasper, February 15, 1979. Collected by L.J. Chambliss. Determined by A.B. Hamon. (F.W. Mead).

A MEALYBUG (*Dysmicoccus neobrevipes* Beardsley) - FLORIDA - New continental United States record. Dade County= eggs, nymphs, and adults severely infested *Furcraea* sp., Agavaceae, in nursery at Miami, October 2, 1978. Collected by P. Chobrda. Determined by D.R. Miller. Plants present for 5+ years. (F.W. Mead).

D. neobrevipes important on pineapple in Hawaii and infests several other cultivated tropical fruits. Also known from Dominican Republic, Fiji, Gilbert Islands (Tarawa and Bairiki), Haiti, Jamaica, Marshall Islands (Kwajalein), Mexico, Philippine Islands, Mariana Islands (Guam and Rota) and Taiwan. Known hosts include *Agave*, *Alpinia*, *Ananas*, *Annona*, *Basella*, *Coccoloba*, *Cocos*, *Ficus*, *Heliconia*, *Mangifera*, *Musa*, *Opuntia*, *Pandanus*, *Pluchea*, *Plumeria*, *Polianthes*, *Portulacaria*, *Psidium*, *Punica*, *Samanea*, *Theobroma*, *Vitex*, *Vitis*, and *Yucca*. Also reported on *Acacia*, *Achras*, *Barringtonia*, *Crescentia*, *Garcinia*, *Guettarda*, *Messerschmidia*, *Nothopanax*, *Pipturus*, *Piscidia*, and *Thespesia*. (D.R. Miller).

WEEDS

BIDDY-BIDDY (*Acaena anserinifolia*) - CALIFORNIA - New county record. Santa Cruz County= this noxious weed, used as ground cover, collected from ornamental planting at Santa Cruz, September 28, 1978, by J. Bauer. Determined by T.C. Fuller. (R.J. Gill).

FOREST AND SHADE TREES

INSECTS

PINE TORTOISE SCALE (*Toumeyella parvicornis*) - FLORIDA - New county record. Gulf County= scattered on leaves of *Pinus elliottii* (slash pine) near Port Saint Joe, February 14, 1979. Collected by J.T. Felty and K.C. Lowery. Determined by A.B. Hamon. (F.W. Mead).

TULIPTREE SCALE (*Toumeyella liriodendri*) - FLORIDA - New county records. Liberty County= scattered on leaves of *Magnolia virginiana* (sweetbay) tree near Sumatra. Collected by J.T. Felty. Nassau County= adults infested stems of *Persea* sp. near Crawford. Collected by G.T. Smith and W.J. Shirley. Both collected February 15, 1979, and determined by A.B. Hamon. (F.W. Mead).

MAN AND ANIMALS

INSECTS

HORN FLY (*Haematobia irritans*) - FLORIDA - Alachua County= increased with warmer weather. Averaged 23 per animal in small beef herd at Newberry week ending February 16. (D. Boyd).

STORED PRODUCTS

INSECTS

REDHEADED ASH BORER (*Neoclytus acuminatus*) - NORTH DAKOTA - New county record. Ward County= adult emerged from ash firewood at residence at Minot, March 3, 1978. Collected by G. Kelly. Determined by D. Kopp. (C.G. Scholl).

RICE WEEVIL (*Sitophilus oryzae*) - NORTH CAROLINA - Johnston, Wake, Harnett, and Sampson Counties= infested 50% of 20 farm corn storage facilities week ending February 16. (T.N. Hunt).

BENEFICIAL ORGANISMS & THEIR ENEMIES

INSECTS

WHEEL BUG (*Arilus cristatus*) - FLORIDA - Hardee County= 1st instar nymphs emerged from egg cluster on Vitis sp. (wild grape) plant near Zolfo Springs, February 2. (J.T. Fetty). Earliest record of nymphs for State. (F.W. Mead).

AN ICHNEUMONID WASP (*Bathyplectes anurus*) - INDIANA - New county record. Morgan County= reared from Hypera postica (alfalfa weevil) larvae collected from alfalfa near Chetwynd, May 24, 1978, by R.W. Meyer. Determined by V. Parman; verified by M.C. Wilson. Represents northernmost record in State. (R.W. Meyer)

A EULOPHID WASP (*Tetrastichus julis*) - PENNSYLVANIA - New county record. Montour County= parasitized 90.4% of Oulema melanopus (cereal leaf beetle) larvae collected from oat field in Anthony Township, June 17, 1977, by A. Proseus. Determined by V.E. Montgomery. (K.C. Kim).

FEDERAL AND STATE PROGRAMS

INSECTS

GRASSHOPPERS - NEW MEXICO - Lincoln County= 2nd instar Eritettix sp. nymphs averaged 5-7 per 0.8 sq m of rangeland about 30 km north of Capitan week ending February 23. (Perry). TEXAS - New county record. Atascosa County= numerous Melanoplus differentialis adults collected on sorghum 3 km south and 0.8 km west of Poteet on farm, June 27, 1977, by N.M. Moritz. Determined by R.L. Hodgdon. (J.A. Jackman).

SCREWWORM (*Cochliomyia hominivorax*) - One case reported from continental United States January 21 to February 3, in Texas. Total of 436 cases confirmed in portion of Barrier Zone in Republic of Mexico January 7-27. Number of sterile flies released January 21 to February 3 totaled 56,050,900 as follows: Texas 34,205,900; Arizona 17,327,000; California 4,518,000. Total of 171,414,300 sterile flies released within Barrier of Mexico January 21 to February 3. (J.E. Novy, M.E. Meadows).

LIGHT TRAP COLLECTIONS

FLORIDA - Gainesville, 2/8-21, BL - ARMYWORM (*Pseudaletia unipuncta*) 3, BLACK CUTWORM (*Agrotis ipsilon*) 1, GRANULATE CUTWORM (*Feltia subterranea*) 7. TEXAS - College Station, 2/8-21, BL - Armyworm 0, black cutworm 0, CABBAGE LOOPER (*Trichoplusia ni*) 0, CORN EARWORM (*Heliothis zea*) 0, FALL ARMYWORM (*Spodoptera frugiperda*) 0, SALTMARSH CATERPILLAR (*Estigmene acrea*) 0, TOBACCO BUDWORM (*H. virescens*) 0, TOBACCO HORNWORM (*Manduca sexta*) 0, TOMATO HORNWORM (*M. quinquemaculata*) 0, YELLOWSTRIPED ARMYWORM (*S. ornithogalli*) 0.

HAWAII PEST REPORT

New Western Hemisphere Records - Specimen of a LYGAEID BUG Elasmolomus v-album (Stal) collected in light trap at Hickam Air Force Base, Oahu, October 4, 1978, by J.W. Beardsley. Determined by J.L. Herring. Five collected from light traps at Hickam Air Force Base and Barbers Point Naval Air Station. Known from the Caroline, Philippine, and Solomon Islands, and on Java. (J.W. Beardsley).

Two adults TENEBRIONID BEETLE (Uloma possibly bonzica Marseul) collected from dead tree at Waimanalo, Oahu, November 24, 1978, by L. Ho. Determined by T.J. Spilman. U. bonzica occurs in Japan. (J.W. Beardsley). Probably noneconomic. (T.J. Spilman).

New State Record - Three specimens of a DYTISCID BEETLE (Rhantus gutticollis) collected from pond at Kula, Maui, November 1, 1978, by G.K. Sano. Determined by P.J. Spangler. (J.W. Beardsley).

General Vegetables - Adults and larvae of LEAFMINER FLIES (Liriomyza spp.) heavily infested and damaged (50% defoliation) 0.61 ha of bearing tomato at Wailua Homesteads, Kauai, week ending February 23. (Sugawa). CABBAGE WEBWORM (Hellula rogatalis) damage heavy on backyard planting of mature mustard cabbage at Pukalani, Maui, week ending February 23. (Miyahira).

Ornamentals - Infestations and foliar damage by COCONUT LEAFROLLER (Hedylepta blackburni) moderate to heavy on coconut trees on 40.5-ha golf course at Wailua, Kauai, week ending February 23. About 70% of fronds affected. Defoliation about 50% on older leaves, less on younger fronds. (Sugawa).

Snail Pest - Limited GIANT AFRICAN SNAIL (Achatina fulica) activity at most areas on Kauai in January in spite of occasional, moderate rains. Government-owned property baited at Poipu and Hanapepe to minimize problem. (Sugawa).

DETECTION

NEW WESTERN HEMISPHERE RECORD

INSECTS

A LYGAEID BUG (Elasmolomus v-album) (Stal)) - HAWAII - Oahu Island. (p. 66).

A TENEBRIONID BEETLE (Uloma possibly bonzica Marseul) - HAWAII - Oahu Island. (p. 66).

NEW CONTINENTAL UNITED STATES RECORD

INSECTS

A MEALYBUG (Dysmicoccus neobrevipes Beardsley) - FLORIDA - Dade County. (p. 64).

NEW STATE RECORDS

INSECTS

CABBAGE SEEDPOD WEEVIL (Ceutorhynchus assimilis) - TENNESSEE - Bradley County. (p. 63).

A DYTISCID BEETLE (Rhantus gutticollis) - HAWAII - Maui Island. (p. 66).

A NOCTUID MOTH (Stibadium spumosum) - OREGON - Grant County. (p. 62).

NEW COUNTY RECORDS

DISEASES

SOYBEAN CYST NEMATODE (Heterodera glycines) - TENNESSEE - Cheatham, Giles, Hickman, Lewis, Macon, Montgomery, Robertson, and Williamson. (p. 62).

INSECTS

ALFALFA WEEVIL (Hypera postica) - TEXAS - Comal. (p. 61).

BLUE ALFALFA APHID (Acyrthosiphon kondoi) - KANSAS - Marion. (p. 61).

A CHRYSOMELID BEETLE (Disonycha glabrata) - TEXAS - Wilson. (p. 62).

COLORADO POTATO BEETLE (Leptinotarsa decemlineata) - TEXAS - Bexar and Wilson. (p. 62).

CONCHUELA (Chlorochroa ligata) - TEXAS - Medina. (p. 61).

A CURCULIONID BEETLE (Anacentrinus deplanatus) - TEXAS - Karnes and Wilson. (p. 61).

A DIASPIDID SCALE (Comstockiella sabalis) - FLORIDA - Franklin. (p. 63).

DIFFERENTIAL GRASSHOPPER (Melanoplus differentialis) - TEXAS - Atascosa. (p. 65)

A EULOPHID WASP (Tetrastichus julis) - PENNSYLVANIA - Montour. (p. 65).

HARLEQUIN BUG (Murgantia histrionica) - TEXAS - Bexar. (p. 63).

AN ICHNEUMONID WASP (Bathyplectes anurus) - INDIANA - Morgan. (p. 65).

LEAFFOOTED BUG (Leptoglossus phyllopus) - TEXAS - Medina. (p. 61).

A NOCTUID MOTH (Stibadium spumosum) - OREGON - Gilliam. (p. 62).

PINE TORTOISE SCALE (Toumeyella parvicornis) - FLORIDA - Gulf. (p. 64).

REDHEADED ASH BORER (Neoclytus acuminatus) - NORTH DAKOTA - Ward. (p. 65).

RICE STINK BUG (Oebalus pugnax) - TEXAS - Medina and Wilson. (p. 61).

SOUTHERN GREEN STINK BUG (Nezara viridula) - TEXAS - Wilson. (p. 62).

SPOTTED BEET WEBWORM (Hymenia perspectalis) - TEXAS - Bexar. (p. 63).

TEA SCALE (Fiorinia theae) - FLORIDA - Hamilton. (p. 64).

TULIPTREE SCALE (Toumeyella liriodendri) - FLORIDA - Liberty and Nassau. (p. 64).

YELLOWSTRIPED ARMYWORM (Spodoptera ornithogalli) - TEXAS - Bexar. (p. 63).

WEEDS

BIDDY-BIDDY (Acaena anserinifolia) - CALIFORNIA - Santa Cruz. (p. 64).

Pest Interceptions of Quarantine Significance at Ports of Entry

Plant Importation and Technical Support Staff
Plant Protection and Quarantine Programs, USDA

<u>Life Stage</u>	<u>Host</u>	<u>Probable Origin</u>	<u>Port of Entry</u>	<u>Destination</u>
<i>Abgrallaspis</i> sp. an armored scale Det. S. Nakahara	adult on Tillandsia plants from cargo	Guatemala	San Francisco	CA
<i>Attacus</i> sp. a saturniid moth Det. D.M. Weisman	pupal with baggage	Philippines	Los Angeles	CA
<i>Carphoborus minimus</i> (Fabricius) a scolytid beetle Det. D.M. Anderson	adult larval	in pallets with tile	Spain	USA
<i>Megacerus euolpus</i> (Erichson) a bruchid beetle Det. J.M. Kingsolver	adult	in Ipomoea seed from mail	Argentina	Beltsville
<i>Tanaos</i> sp. a weevil Det. D.R. Whitehead	adult	in Protea cut flowers	South Africa	Kennedy Airport
<i>Thrips obscuratus</i> Crawford a thrip	adult	on strawberries from cargo	New Zealand	Honolulu
<i>Achatina fulica</i> Bowdich giant African snail Det. R. Kunishi	adult	in passenger baggage	Hawai'i	Honolulu
<i>Otala vermiculata</i> (Müller) a snail Det. W.D. McClellan	adult	on container vans of tractor parts	Italy	New Orleans

METRIC CONVERSION

1 cm = 0.393701 in
1 m = 3.28084 ft = 1.09361 yd
1 km = 0.621371 mi
1 sq cm = 0.155000 sq in
1 sq m = 10.7639 sq ft = 1.19599 sq yd
1 ha = 2.47104 acres
1 sq km = 0.386101 sq mi
1 kg = 2.20462 lb
1 t (metric ton) = 1.10231 short ton
1 kg/ha = 0.892183 lb/acre
1 t/ha = 0.446091 ton/acre

UNITED STATES DEPARTMENT OF AGRICULTURE

Animal and Plant Health Inspection Service

Hyattsville, Maryland 20782

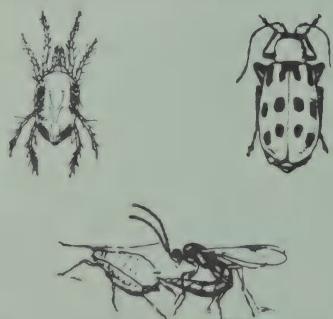
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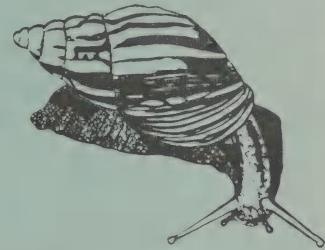
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March 9, 1979

Cooperative PLANT PEST REPORT

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DEPARTMENT
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This publication is distributed weekly to Federal and State agencies, universities, farmers, and others interested in containing or controlling pests in the United States.

Data included in this publication are compiled from reports submitted by cooperating State, Federal and other agricultural and industrial specialists. Accuracy of the reports is not verified prior to publication.

Cooperative Plant Pest Report supersedes *Cooperative Economic Insect Report*, which was discontinued with Volume 25, Numbers 49-52, 1975.

Correspondence should be directed to:

CPPR
New Pest Detection and Survey Staff
Plant Protection and Quarantine Programs
Animal and Plant Health Inspection Service
U.S. Department of Agriculture
Federal Building #1
Hyattsville, Maryland 20782

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COOPERATIVE PLANT PEST REPORT

HIGHLIGHTS

Current Conditions

A LEAF DROP causing lettuce loss in southwestern area of Arizona. (p. 72).

Detection

New State records include SHIELDBACKED PINE SEEDBUG, a REDUVIID BUG (p. 73), and GOLDENGLOW APHID (p. 75) in Oklahoma.

For new county and island records see page 75.

Disease caused by ONION YELLOW DWARF VIRUS new for a species of onion for Hawaii. (p. 74).

Some First Occurrences of the Season

GREEN PEACH APHID in Oregon.

Reports in this issue are for the week ending March 2 unless otherwise indicated.

CONTENTS

Corn, Sorghum, Sugarcane	
Diseases.....	71
Insects.....	71
Small Grains	
Insects.....	71
Forage Legumes	
Insects.....	71
Sugar Beets	
Insects.....	71
Cole Crops	
Insects.....	72
Beneficial Organisms and Their Enemies	
Insects.....	73
Federal and State Programs	
Insects.....	73
Hawaii Pest Report.....	74
Detection.....	75
Corrections.....	73
Light Trap Collections.....	74
Pest Interceptions of Quarantine Significance at Ports of Entry.....	76
General Vegetables	
Diseases.....	72
Deciduous Fruits and Nuts	
Insects.....	72
Ornamentals	
Insects.....	72
Forest and Shade Trees	
Insects.....	72
Stored Products	
Insects.....	73

CORN, SORGHUM, SUGARCANE

DISEASES

GOSS'S WILT (Corynebacterium nebraskense) - NEBRASKA - New county records. Thayer County= infected corn taken from field near Carleton, August 4, 1978. Collected and determined by B. Doupnik. McPherson County= infected corn collected near Tryon, August 8, by P. Hordquist. Determined by J. Riesselman. (S. Poe).

MAIZE CHLOROTIC MOTTLE VIRUS - NEBRASKA - New county record. Furnas County= infected corn collected from fields near Edison, July 10, 1978, by B. Doupnik. Determined by L. Lane. (S. Poe).

INSECTS

NORTHERN CORN ROOTWORM (Diabrotica longicornis) - TEXAS - New county record. Atascosa County= numerous adults collected on corn on farm 1 km north of Lytle, June 12, 1978, by N.M. Moritz. Determined by R.L. Hodgdon. (J.A. Jackman).

SOUTHERN GREEN STINK BUG (Nezara viridula) - TEXAS - New county record. Atascosa County= 3 adults collected on sorghum on farm 1 km north of Lytle city limits, September 26, 1978, by N.M. Moritz. Determined by R.L. Hodgdon. (J.A. Jackman).

SMALL GRAINS

INSECTS

CORN LEAF APHID (Rhopalosiphum maidis) - ARIZONA - County= adults per barley stem on 50 stems: Yuma= 10.3. (Mullis).

FORAGE LEGUMES

INSECTS

ALFALFA WEEVIL (Hypera postica) - KANSAS - SE, C, EC, and NE Districts> 14 alfalfa fields surveyed weeks ending February 9 and 16, eggs only in Saline County= averaged 0.1 egg per stem. (K.O. Bell, Jr.).

EGYPTIAN ALFALFA WEEVIL (Hypera brunneipennis) - ARIZONA - County= counts on alfalfa: Pinal= larvae 45-150 and adults 1-2 per 100 sweeps and Yuma= larvae 1-51 per 10 sweeps. (J.R. Roney et al.).

PEA APHID (Acyrthosiphon pisum) - ARIZONA - County= counts on alfalfa: Pinal= various stages 462-1,200 per 100 sweeps and Maricopa= adults 250 per 50 sweeps. (J.R. Roney et al.).

SUGAR BEETS

INSECTS

GREEN PEACH APHID (Myzus persicae) - ARIZONA - County= adults per 3.7 row m of sugar beets: Maricopa= 100. (J.R. Roney et al.).

COLE CROPS

INSECTS

SOUTHERN CORN ROOTWORM (*Diabrotica undecimpunctata howardi*) - SOUTH CAROLINA - Jasper County= adults moderate on 12 ha of newly planted cabbage near Ridge-land. Damage light but plants ragged. (E.G. Tate).

GENERAL VEGETABLES

DISEASES

A LEAF DROP (*Sclerotinia sclerotiorum*) - ARIZONA - Yuma County= loss on lettuce occurred. Treatments ineffective. (Barkley).

DECIDUOUS FRUITS AND NUTS

INSECTS

PEAR PSYLLA (*Psylla pyricola*) - CALIFORNIA - County= low and high counts per 50 beats of pear trees February 5-9: Lake= 0 and 3 at Scotts Valley, 0 and 0 at Upper Lake and Big Valley. Mendocino= 0 and 1 at Ukiah. (E. Burger, L. Hawkins)

GREEN PEACH APHID (*Myzus persicae*) - OREGON - Jackson County= overwintered eggs began hatch and nymphs on peach in Medford area. (D.W. Berry).

ORNAMENTALS

INSECTS

AN ARMORED SCALE (*Gymnaspis aechmeae*) - FLORIDA - New county record. Jefferson County= infested 1 of 20 bromeliad plants in nursery at Monticello, July 6, 1978. Collected and determined by Q.G. Anglin; confirmed by A.B. Hamon. Plants in nursery about 15 years. (F.W. Mead).

PINEAPPLE SCALE (*Diaspis bromeliae*) - FLORIDA - New county record. Gadsden County= adults infested bromeliad plant at residence at Havana, May 2, 1978. Collected by Q.G. Anglin. Determined by A.B. Hamon. Owner had plant for 15 years. (F.W. Mead).

WALNUT SCALE (*Quadrapsidiotus juglansregiae*) - FLORIDA - New county record. Columbia County= adults moderately infested Rhus sp. (sumac) plants in nursery at Lake City, November 9, 1977. Collected by C.H. Webb. Determined by A.B. Hamon. Plants from wilds. Have been in nursery for some time. (F.W. Mead).

SOUTHERN RED MITE (*Oligonychus ilicis*) - OREGON - New county record. Marion County= eggs and adults collected from ornamental azaleas near Brooks, October 25, 1978, by R.W. Long. Determined by J.L. Mellott. (R.L. Penrose).

FOREST AND SHADE TREES

INSECTS

PINE TORTOISE SCALE (*Toumeyella parvicornis*) - FLORIDA - New county records. Sumter County= adults scattered on stems of Pinus echinata (shortleaf pine) plants in yard at Webster, May 30, 1978. Collected by A.L. Bentley. Suwannee

County= pine tortoise scale moderately infested leaves of Pinus palustris (longleaf pine) at Live Oak, June 1, 1978. Collected by A.E. Graham and C.H. Webb. Both determined by A.B. Hamon. (F.W. Mead).

SHIELDBACKED PINE SEEDBUG (Tetyra bipunctata) - OKLAHOMA - New State record. McCurtain County= several adults collected from Pinus sp. (shortleaf pine) near Idabel, September 20, 1977, by B. Smith and G. Lehar. Determined by D.C. Arnold Collected again October 3, in same area. (D.C. Arnold).

STORED PRODUCTS

INSECTS

RICE WEEVIL (Sitophilus oryzae) - NORTH CAROLINA - Activity increased by warm weather. About 30% of commercial and onfarm corn storage facilities expected to need fumigation if grain stored 30⁺ days during spring and early summer. (T.N. Hunt).

BENEFICIAL ORGANISMS & THEIR ENEMIES

INSECTS

A REDUVIID BUG (Pniortoris modesta) - OKLAHOMA - New State record. SE area> McCurtain County= specimen collected at light at Beavers Bend State Park, about 20 km from Broken Bow, June 14, 1971, by D.C. Arnold. Determined by D.C. Arnold and W.A. Drew. Second specimen collected at same location June 6, 1978. (D.C. Arnold).

FEDERAL AND STATE PROGRAMS

INSECTS

SCREWWORM (Cochliomyia hominivorax) - No cases reported from continental United States February 4-10. Number of sterile flies released this period totaled 20,675,200 as follows: Texas 12,152,200; Arizona 8,388,000; California 135,000. Total of 85,986,400 sterile flies released within Barrier of Mexico. (J.E. Novy, M.E. Meadows).

CORRECTIONS

CPPR 3(31):407 - "GRAMINICOLA ANTHRACNOSE (Colletotrichum graminicola) - IOWA - ... July 14, 1978," should read "ANTHRACNOSE LEAF BLIGHT (Colletotrichum graminicola) - IOWA - ... June 14, 1978," (D. Williams).

HAWAII PEST REPORT

General Vegetables - PEPPER WEEVIL (Anthonomus eugenii) adults heavy on 0.8 ha of unmaintained bell pepper at Moloaa. New host records for BROAD MITE (Polyphagotarsonemus latus) in State. All stages moderately infested Luffa acutangula (angled Tuffa) in community garden at Kaumakani, Kauai, February 23, 1979. Collected by D. Sugawa and L. Nakahara. Infestation heavy on Telosma cordata (Chinese violet) in backyard planting at Honolulu, Oahu, February 27, 1979. Collected by K. Murai. Both determined by S. Higa. (L. Nakahara).

ONION YELLOW DWARF VIRUS, new disease record for Japanese bunching onion in State. Found in samples of Allium fistulosum collected on farm at Waianae, Oahu, January 1979, (exact date not given) by S. Fukuda and L. Nakahara. Determined by M. Ishii and A.P. Martinez. Typical symptoms consist of slight to severe dwarfing of plant, yellow streaks in leaves (especially prominent toward leaf bases), and various degrees of leaf malformation. (A.P. Martinez).

Fruits and Nuts - New host record for PLUMERIA WHITEFLY (Paraleyrodes perseae) in State. All stages lightly infested single Psidium guajava (common guava) tree at Kaumakani, Kauai, February 23, 1979. Collected by D. Sugawa and L. Nakahara. Determined by S. Higa. (L. Nakahara).

Ornamentals - New island and new host record for State. All stages of a WHITEFLY (Paraleyrodes naranjae) light on Hibiscus sp. plants at Lihue, Kauai, February 22, 1979. Collected by D. Sugawa and L. Nakahara. Determined by S. Higa. (L. Nakahara).

LIGHT TRAP COLLECTIONS

ARIZONA - Mesa, 2/19-25, BL - ARMYWORM (Pseudaletia unipuncta) 1, CABBAGE LOOPER (Trichoplusia ni) 1, VARIEGATED CUTWORM (Peridroma saucia) 33, YELLOWSTRIPED ARMYWORM (Spodoptera ornithogalli) 1. TEXAS - College Station, 2/22-28, BL - Armyworm 0, BLACK CUTWORM (Agrotis ipsilon) 0, cabbage looper 0, CORN EARWORM (Heliothis zea) 0, FALL ARMYWORM (Spodoptera frugiperda) 3, SALTMARSH CATERPILLAR (Estigmene acrea) 0, TOBACCO BUDWORM (H. virescens) 0, TOBACCO HORNWORM (Manduca sexta) 0, TOMATO HORNWORM (M. quinquemaculata) 0, yellowstriped armyworm 0.

DETECTION

NEW STATE RECORDS

INSECTS

GOLDENGLOW APHID (Dactynotus rudbeckiae) - OKLAHOMA - NC District > Payne County = collected from Rudbeckia amplexicaulis (clasping coneflower) at Stillwater, May 24, 1978, by B.O. Cartwright. Determined by M.B. Stoetzel. (D.C. Arnold).

A REDUVIID BUG (Pnirontis modesta) - OKLAHOMA - McCurtain County. (p. 73).

SHIELDBACKED PINE SEEDBUG (Tetyra bipunctata) - OKLAHOMA - McCurtain County. (p. 73).

NEW COUNTY AND ISLAND RECORDS

DISEASES

GOSS'S WILT (Corynebacterium nebraskense) - NEBRASKA - Thayer and McPherson. (p. 71).

MAIZE CHLOROTIC MOTTLE VIRUS - NEBRASKA - Furnas. (p. 71).

INSECTS

AN ARMORED SCALE (Gymnaspis aechmeae) - FLORIDA - Jefferson. (p. 72).

NORTHERN CORN ROOTWORM (Diabrotica longicornis) - TEXAS - Atascosa. (p. 71).

PINEAPPLE SCALE (Diaspis bromeliae) - FLORIDA - Gadsden. (p. 72).

PINE TORTOISE SCALE (Toumeyella parvicornis) - FLORIDA - Sumter and Suwannee. (p. 72-73).

SOUTHERN GREEN STINK BUG (Nezara viridula) - TEXAS - Atascosa. (p. 71).

SOUTHERN RED MITE (Oligonychus ilicis) - OREGON - Marion. (p. 72).

WALNUT SCALE (Quadraspidiotus juglansregiae) - FLORIDA - Columbia. (p. 72).

A WHITEFLY (Paraleyrodes naranjae) - HAWAII - Kauai. (p. 74).

OTHER NEW RECORDS

DISEASES

ONION YELLOW DWARF VIRUS - HAWAII - New disease for Japanese bunching onion for State. (p. 74).

Pest Interceptions of Quarantine Significance at Ports of Entry

Plant Importation and Technical Support Staff
Plant Protection and Quarantine Programs, USDA

<u>Life Stage</u>	<u>Host</u>	<u>Probable Origin</u>	<u>Port of Entry</u>	<u>Destination</u>
<u><i>Arhopalus</i> sp.</u> a cerambycid beetle Det. D.M. Anderson	larval	in wood crates of marble	Republic of China	Savannah GA
<u><i>Hypocryphalus</i> sp.</u> a scolytid beetle Det. D.M. Anderson	larval adult	in wood crates of manhole covers	India	San Francisco CA
<u><i>Ips cembrae</i> (Heer)</u> a scolytid beetle Det. D.M. Anderson	larval adult	in wood crates of aluminum coils	Italy	Charleston NY
<u><i>Iridomyrmex</i> sp.</u> an ant Det. D.R. Smith	adult	in wood crates of marble	Republic of China	Savannah GA
<u><i>Lasioptera</i> sp.</u> a cecidomyiid midge Det. R.J. Gagné	larval	in reed mats from cargo	Hungary	Houston TX
<u><i>Pogonocheirus fasciculatus</i> (De Geer)</u> a cerambycid beetle Det. D.M. Anderson	larval	in wood crates of aluminum	Norway	Charleston SC
<u><i>Polyraphis</i> sp.</u> a cerambycid beetle Det. D.M. Anderson	larval	in logs	Brazil	New York --
<u><i>Bradybaena</i> sp.</u> a bradybaenid snail Det. R. Munkittrick	adult	in crates of marble	Republic of China	Savannah GA

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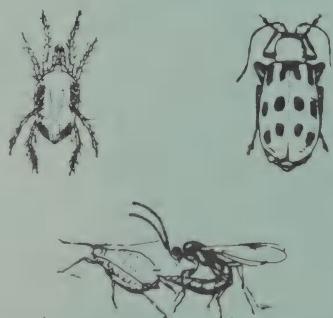
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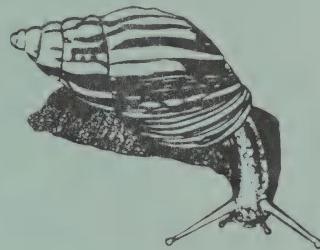
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March 16, 1979

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Cooperative PLANT PEST REPORT



Animal
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DEPARTMENT
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COOPERATIVE PLANT PEST REPORT

HIGHLIGHTS

Detection

COWPEA WITCHWEED in Florida is new for the Western Hemisphere. (p. 84).

New State records include SUNFLOWER MOTH in Oregon (p. 80), a SAWFLY in Utah, a TENTHREDINID SAWFLY, a EUPELMID WASP, and a PHYMATID BUG in Oklahoma (p. 81), an ANT in Utah (p. 82), a COREID BUG, a PAMPHILIID SAWFLY, and a TENTHREDINID SAWFLY in Oklahoma, and a WEEVIL in North Dakota (p. 83).

For new county records see page 83.

Special Reports

Striga gesnerioides (Willd.) Vatke (Scrophulariaceae), First Record of the Species in the Western Hemisphere. (p. 84).

Witchweed Quarantines. Map. Centerfold.

Reports in this issue are for the week ending March 9 unless otherwise indicated.

CONTENTS

Corn, Sorghum, Sugarcane	
Diseases.....	79
Insects.....	79
Small Grains	
Insects.....	79
Forage Legumes	
Insects.....	80
Sugar Beets	
Insects.....	80
Miscellaneous Field Crops	
Insects.....	80
Beneficial Organisms and Their Enemies	
Insects.....	81
Federal and State Programs.....	82
Hawaii Pest Report.....	82
Detection.....	82
Light Trap Collections.....	82
Pest Interceptions of Quarantine Significance at Ports of Entry.....	85
<u>Striga gesnerioides</u> (Willd.) Vatke (Scrophulariaceae), First Record of the Species in the Western Hemisphere.....	84
Witchweed Quarantines. Map. Centerfold.	

CORN, SORGHUM, SUGARCANE

DISEASES

SORGHUM DOWNY MILDEW (*Sclerospora sorghi*) - KANSAS - New county records taken in sorghum fields in 1978. (T. Sim, IV).

District> County	Nearest City	Date	Collector	Determiner
SW> Grant	Ulysses	Aug 23	M.F. Walker	V.H. Lengkeek
SW> Ford	Dodge	Aug 4	V.H. Lengkeek	V.H. Lengkeek
NC> Kiowa	Haviland	Jul 28	V.H. Lengkeek	V.H. Lengkeek
NC> Edwards	Sanford	Sep 18	V.H. Lengkeek	V.H. Lengkeek
NE> Pottawatomie	Belvue	Aug 2	T. Sim, IV	T. Sim, IV
NE> Atchison	Lancaster	Aug 17	T. Sim, IV	T. Sim, IV

INSECTS

WESTERN CORN ROOTWORM (*Diabrotica virgifera*) - ILLINOIS - New county record.

ESE District> Lawrence County= collected in popcorn field near Saint Francisville, August 4, 1978, by K. Black. Determined by J.K. Bouseman. (K. Black). OHIO - New county records taken from corn in 1978. Collected and determined by B.M. Drees. (B.M. Drees).

District> County	Nearest City	Date
C> Union	Essex	Aug 2
SW> Butler	West Elkton	Aug 8
WC> Clark	Hustead	Aug 8
SW> Clinton	Harveysburg	Aug 8
SW> Greene	Xenia	Aug 8
C> Madison	Summerford	Aug 8
SW> Montgomery	Bachman	Aug 8
SW> Warren	Red Lion	Aug 8
NC> Lorain	Lagrange	Aug 16
C> Franklin	Columbus	Aug 16

A WEEVIL (*Conotrachelus leucophaeatus*) - TEXAS - New county record. SC

District> Karnes County= adult collected on corn in garden at Karnes City, May 16, 1978, by L. Beikman. Determined by B.J. Abraham. (J.A. Jackman).

SMALL GRAINS

INSECTS

ARMY CUTWORM (*Euxoa auxiliaris*) - OKLAHOMA - District> County= averages in wheat fields: NC> Garfield, Grant, Kay, Noble, and C> Kingfisher= very light in 27 of 30 fields, 1 per 0.3 row m in 2 fields, and 2 per 0.3 row m in 1 field. (D.C. Arnold).

WINTER GRAIN MITE (*Penthaleus major*) - OKLAHOMA - District> County= counts in most wheat fields: NC> Major, Alfalfa, Garfield, Grant, Kay, Noble, and C> Logan, Canadian, and Kingfisher= 1-5 per 0.3 row m. (D.C. Arnold).

FORAGE LEGUMES

INSECTS

ALFALFA WEEVIL (Hypera postica) - NEW MEXICO - Larvae increased in Pecos Valley, all instars present. District> County= averages per 0.09 sq m of alfalfa: SE> Eddy= 10-15 larvae, 30-50 in Cottonwood area; eggs in 5 of 40 stems in same area and Lea= 4-12 larvae. Adults in flight and eggs noted since second week in February. (L. Gholson). OKLAHOMA - District> County= counts on alfalfa samples: C> Payne= 4 eggs per 0.09 sq m and SW> Jackson= larvae hatched; none found in field. (D.C. Arnold).

EGYPTIAN ALFALFA WEEVIL (Hypera brunneipennis) - ARIZONA - District> County= larval counts on alfalfa: C> Maricopa= 4-800 per 100 sweeps, Pinal= 4-350 per 100 sweeps, and SW> Yuma= 15-100 per 10 sweeps. (L.G. Blackledge et al.).

PEA APHID (Acyrthosiphon pisum) - ARIZONA - District> County= counts on alfalfa: C> Maricopa= nymphs 30-40 and adults 100-2,000 per 100 sweeps, Pinal= adults 31-1,000 per 100 sweeps, and SW> Yuma= various stages 100 per 10 sweeps. (L.G. Blackledge et al.). NEW MEXICO - District> County= adult and nymphal averages per alfalfa plant [averaged 8 cm tall]: SE> Eddy= 10-15 in Artesia area and Lea= 10-15 in Lovington and Hobbs areas. Populations heavier on taller plants. (L. Gholson).

SUGAR BEETS

INSECTS

GREEN PEACH APHID (Myzus persicae) - ARIZONA - District> County= counts on sugar beets: C> Maricopa= various stages 40-60 per 3.7 row m and Pinal= adults 189 per 100 sweeps. (J. Kirkpatrick et al.).

MISCELLANEOUS FIELD CROPS

INSECTS

SUNFLOWER MOTH (Homoeosoma electellum) - OREGON - New State record. Gilliam County= larvae collected from flowers of Helianthus annuus (sunflower) along Interstate Highway 80N, 16.4 km east of John Day River, August 30, 1978, by R.L. Westcott. New county record. Umatilla County= larvae collected from commercially grown sunflower 17.7 km southeast of Milton-Freewater, August 31, by G. Fisher. Both determined by R.L. Westcott and confirmed by T.D. Eichlin. (R.L. Westcott).

GENERAL VEGETABLES

INSECTS

CABBAGE LOOPER (Trichoplusia ni) - ARIZONA - District> County= larvae per 25 lettuce plants: SW> Yuma= 2-25. (F. Brooks et al.).

SMALL FRUITS

INSECTS

A SAWFLY (Pamphilus sitkensis) - UTAH - New State record. N District> Cache County= adults very heavy in Rubus sp. (raspberry) patch at River Heights, May 3, 1977. Collected by D.W. Davis, G.F. Knowlton, and W.J. Hanson. Determined by F.D. Parker. (R.S. Roberts).

ORNAMENTALS

INSECTS

JUNIPER WEBWORM (Dichomeris marginella) - OREGON - Multnomah County= warm weather caused overwintering larvae to become active on ornamental junipers grown in field nurseries in eastern area. (R. Angyal).

AN ARMORED SCALE (Gymnaspis aechmeae) - FLORIDA - New county record. NW District> Jackson County= adults collected on Aechmea fasciata in nursery at Marianna, July 27, 1978, by K. Bedat and A.E. Graham. Determined by A.B. Hamon. Host in locality about 15 years. (F.W. Mead).

MEXICAN BLACK SCALE (Saissetia miranda) - CALIFORNIA - New county record. San Joaquin Valley District> San Joaquin County= adult on ornamental Ficus lyrata (Fiddle-leaf fig) in nursery at Ripon, January 30, 1979. Collected by A. Moretto and D. Thompson. Determined by R. Gill. Host brought into locality February 1978. (R.T. Robbins).

FOREST AND SHADE TREES

INSECTS

A TENTHREDINID SAWFLY (Nematus abbotii) - OKLAHOMA - New State record. SC District> Johnston County= adults collected from Robinia pseudoacacia (black locust) at Mannsville, May 4, 1976, by D.C. Arnold. Determined by D.R. Smith. (D.C. Arnold).

BENEFICIAL ORGANISMS & THEIR ENEMIES

INSECTS

A EUPELMID WASP (Anastatus semiflavidus) - OKLAHOMA - New State record. Panhandle District> Cimarron County= 3 adults emerged from Hemileuca oliviae (range caterpillar) eggs in laboratory. Eggs collected 10 km northwest of Felt, February 2, 1978, by B. Massey. Determined by E.E. Grissell. (D.C. Arnold).

A PHYMATID BUG (Phymata pallida) - OKLAHOMA - New State record. Panhandle District> Cimarron County= swept from rangeland 16 km west of Felt, July 27, 1977, by J.W. Johnson. Determined by N. Kormilev. (D.C. Arnold).

FEDERAL AND STATE PROGRAMS

INSECTS

RED IMPORTED FIRE ANT (Solenopsis invicta) - SOUTH CAROLINA - New county record. NC District> Lancaster County= found in and around nursery greenhouse at Lancaster, November 21, 1978, by W.K. Glenn. Determined by J.L. McKee. (J.B. Kissam).

SCREWWORM (Cochliomyia hominivorax) - No cases reported from continental United States February 11-17. Total of 215 cases confirmed in portion of Barrier Zone in Republic of Mexico January 28 to February 3. Total of 206 cases reported in Mexico south of Barrier Zone. Number of sterile flies released February 11-17 totaled 26,533,900 as follows: Texas 15,279,900; Arizona 11,119,000; California 135,000. Total of 89,780,300 sterile flies released within Barrier of Mexico. (J.E. Novy, M.E. Meadows).

HAWAII PEST REPORT

General Vegetables - CARMINE SPIDER MITE (Tetranychus cinnabarinus) infestations moderate to heavy on long beans and eggplant on 0.10 ha total at Hanapape, Kauai. (D. Sugawa et al.).

LIGHT TRAP COLLECTIONS

ARIZONA - Mesa, 2/26 to 3/4, BL - BLACK CUTWORM (Agrotis ipsilon) 2, CABBAGE LOOPER (Trichoplusia ni) 4, VARIEGATED CUTWORM (Peridroma saucia) 108, YELLOWSTRIPED ARMYWORM (Spodoptera ornithogalli) 2.

DETECTION

NEW WESTERN HEMISPHERE RECORD

WEEDS

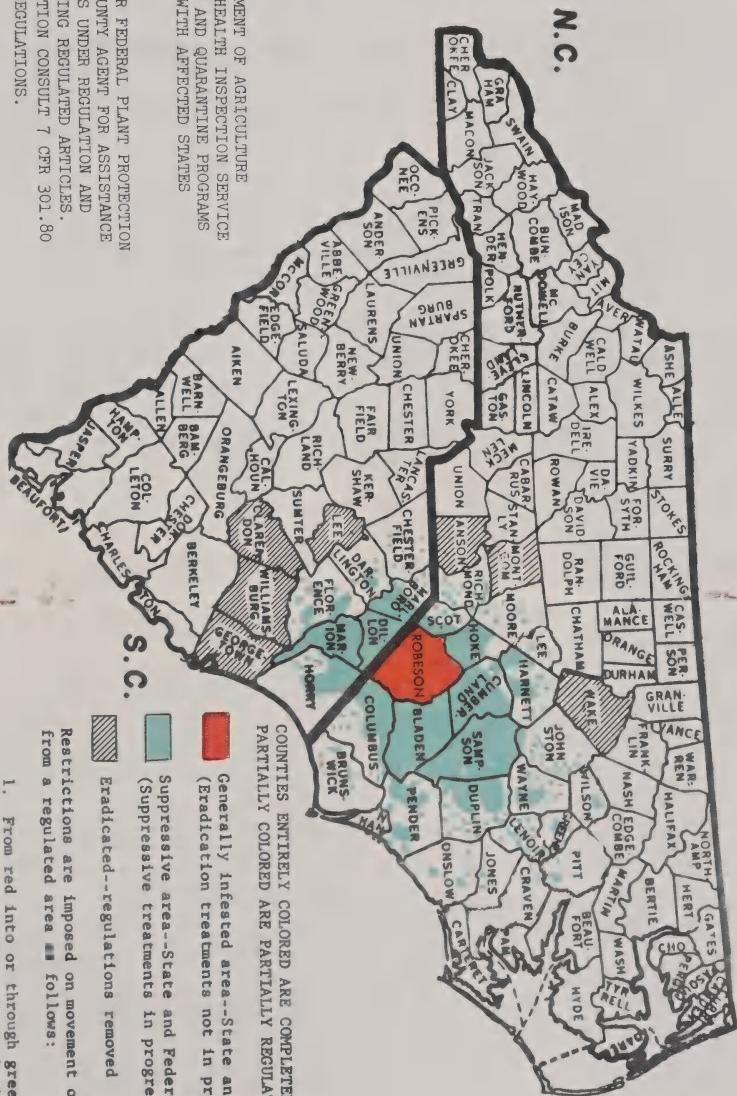
COWPEA WITCHWEED (Striga gesnerioides (Willdenow) Vatke) - FLORIDA - Polk County. (p. 84).

NEW STATE RECORDS

INSECTS

AN ANT (Myrmecocystus romainei) - UTAH - N District> Box Elder County= collected west of Park Valley (host not given), June 21, 1975, by C.F. Knowlton and W.J. Hanson. Determined by A. Francoeur. (R.S. Roberts).

WITCHWEED QUARANTINES



U. S. DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE
PLANT PROTECTION AND QUARANTINE PROGRAMS
COOPERATING WITH AFFECTED STATES

CONSULT YOUR STATE OR FEDERAL PLANT PROTECTION INSPECTOR OR YOUR COUNTY AGENT FOR ASSISTANCE REGARDING EXACT AREAS UNDER REGULATION AND REQUIREMENTS FOR MOVING REGULATED ARTICLES. FOR DETAILED INFORMATION CONSULT 7 CFR 301.80 FOR QUARANTINE AND REGULATIONS.

REVISED OCTOBER 1978 SEE REVERSE SIDE FOR LIST OF REGULATED ARTICLES

THE FOLLOWING REGULATED ARTICLES REQUIRE A CERTIFICATE
OR PERMIT YEAR-ROUND EXCEPT AS INDICATED

1. Soil, compost, decomposed manure, humus, muck, and peat, separately or with other things; sand; and gravel.
Soil samples shipped to approved laboratories do not require attachment of certificate or permit.*
2. Plants with roots.
3. Grass sod.
4. Plant crowns and roots for propagation.
5. True bulbs, corms, rhizomes, and tubers of ornamental plants.
6. Root crops, except those from which all soil has been removed.
7. Peanuts in shells and peanut shells, except boiled or roasted peanuts.
8. Small grains and soybeans.
Small grains are exempt** if harvested in bulk or into new or treated containers, and if the grains and containers for the grains have not come in contact with the soil, or if they have been cleaned at a designated facility.*
Soybeans are exempt when determined by an inspector that the soybeans were grown, harvested, and handled in a manner to prevent contamination from witchweed seed.
9. Hay, straw, fodder, and plant litter of any kind.
10. Seed cotton and gin trash.
Seed cotton is exempt if moving to a designated gin.*
11. Stumpwood.
12. Long green cucumbers, cantaloups, peppers, squash, tomatoes, and watermelons, except those from which all soil has been removed.
13. Pickling cucumbers, string beans, and field peas.
Pickling cucumbers, string beans, and field peas are exempt** if washed free of soil with running water.
14. Cabbage, except firm heads with loose outer leaves removed.
15. Leaf tobacco, except flue-cured leaf tobacco.
16. Ear corn, except shucked ear corn.
17. Used crates, boxes, burlap bags, cotton picking sacks, and other used farm products containers.
18. Used farm tools.
Used farm tools are exempt** if cleaned free of soil.
19. Used mechanized cultivating equipment and used harvesting equipment.
Used mechanized cultivating equipment is exempt** if cleaned free of soil.
20. Used mechanized soil-moving equipment.
Used mechanized soil-moving equipment is exempt** if cleaned free of soil.
21. Any other products, articles, or means of conveyance, of any character whatsoever, not covered by the above when it is determined by an inspector that they present a hazard of spread of witchweed and the person in possession thereof has been so notified.

*Information as to designated laboratories, facilities, gins, oil mills, and processing plants may be obtained from an inspector.

**Exempt if not exposed to infestation after cleaning or other prescribed handling.

A COREID BUG (Cimolus obscurus) - OKLAHOMA - SE District> Le Flore County= 2 adults taken under loose bark of dead tree at Braden, December 2, 1964. Collected and determined by D.C. Arnold; confirmed by J.L. Herring. (D.C. Arnold).

A EUPELMID WASP (Anastatus semiflavidus) - OKLAHOMA - Cimarron County. (p. 81).

A PAMPHILIID SAWFLY (Pamphilus amplectus) - OKLAHOMA - NE District> Delaware County= adult collected in flight at Jay, May 25, 1963, by M.E. Cochrane. Determined by D.R. Smith. (D.C. Arnold).

A PHYMATID BUG (Phymata pallida) - OKLAHOMA - Cimarron County. (p. 81).

A SAWFLY (Pamphilus sitkensis) - UTAH - Cache County. (p. 81).

SUNFLOWER MOTH (Homoeosoma electellum) - OREGON - Gilliam County. (p. 80).

A TENTHREDINID SAWFLY (Craterocercus obtusus) - OKLAHOMA - SC District> Pontotoc County= adult collected at Fitzhugh (host unknown), June 3, 1953, by J. Young. Determined by D.R. Smith. (D.C. Arnold).

A TENTHREDINID SAWFLY (Nematus abbotii) - OKLAHOMA - Johnston County. (p. 81).

A WEEVIL (Hypera castor) - NORTH DAKOTA - WC District> McKenzie County= collected in pit fall trap in woodland in rural area, October 8, 1976, by P. Lago and S. Kurtz. Determined by D. Aarhus and D.R. Whitehead. (C.G. Scholl).

NEW COUNTY RECORDS

DISEASES

SORGHUM DOWNY MILDEW (Sclerospora sorghi) - KANSAS - Grant, Ford, Kiowa, Edwards, Pottawatomie, and Atchison. (p. 79).

INSECTS

AN ARMORED SCALE (Gymnaspis aecheae) - FLORIDA - Jackson. (p. 81).

A COREID BUG (Cimolus obscurus) - OKLAHOMA - EC District> Okfuskee County= 1 adult collected on ground at Welty, July 22, 1965; SC District> Bryan County= 2 adults collected under log at Durant, February 26, 1974, and Johnston County= 2 adults collected on Melothria pendula at Mannsville, July 27, 1976. All collected and determined by D.C. Arnold. (D.C. Arnold).

MEXICAN BLACK SCALE (Saissetia miranda) - CALIFORNIA - San Joaquin. (p. 81).

RED IMPORTED FIRE ANT (Solenopsis invicta) - SOUTH CAROLINA - Lancaster. (p. 82).

SUNFLOWER MOTH (Homoeosoma electellum) - OREGON - Umatilla. (p. 80).

A WEEVIL (Conotrachelus leucophaeatus) - TEXAS - Karnes. (p. 79).

WESTERN CORN ROOTWORM (Diabrotica virgifera) - ILLINOIS - Lawrence. OHIO - Union, Butler, Clark, Clinton, Greene, Madison, Montgomery, Warren, Lorain, and Franklin. (p. 79).

Striga gesnerioides (Willd.) Vatke (Scrophulariaceae), First Record of the Species in the Western Hemisphere

Richard P. Wunderlin 1/, Allen G. Shuey 2/,
and Lytton J. Musselman 3/

Recently, plants collected in central Florida by the second author were identified by the senior author as Striga gesnerioides (Willd.) Vatke. This constitutes the first report of cowpea witchweed in the Western Hemisphere. The Florida collections are as follows: POLK CO.: West of E. F. Griffin Road, ca. 0.5 mi (0.8 km) N of Lyle Parkway near Bartow (NW 1/4 of Section 36, T29S, R24E), October 12, 1978, Shuey, Clewell, & Swanson 2156 (University of South Florida Herbarium (USF)), October 26, 1978, Shuey & Swanson 2157 (USF). The plants were in flower and had mature fruits. The site borders an old phosphate strip mine and is greatly disturbed, containing mainly weedy species. The Striga population was parasitic on two leguminous species, Alysicarpus vaginalis (L.) DC. and Indigofera hirsuta L. Both hosts were introduced from the Eastern Hemisphere and are wide ranging weedy species in Florida.

S. gesnerioides ranges widely from the Cape Verde Islands, through tropical and southern Africa, and through the Arabian Peninsula to western and southern India. This species parasitizes a number of members of the pea family, and various members of the morningglory, spurge, lily, acanthus, and nightshade families. This witchweed is a variable species with specialized physiological strains restricted to one host or even one variety of a host.

Yields of cowpeas in West Africa may be reduced by as much as 50% in infestations where as many as 100% of the plants are affected deleteriously. Cowpea witchweed has been reported as a serious pathogen of tobacco in Rhodesia. Infestations of peanuts in northern Nigeria are seldom adverse. Its pathogenic potential in this country on such crops as soybeans, peanuts, and nonleguminous crops cannot be predicted without careful host studies. Having several hosts of economic value, the potential for effective dispersal, and perhaps long seed viability, S. gesnerioides is likely to become a rapidly spreading weed difficult to eradicate, and possessing the potential to inflict economic loss to a variety of crop and ornamental plants in the tropical and subtropical United States.

A more detailed paper of this species will appear in the April issue of the "Plant Disease Reporter."

1/ Department of Biology, University of South Florida, Tampa, FL 33620.

2/ Conservation Consultants, Inc., P.O. Box 35, Palmetto, FL 33561.

3/ Department of Biological Sciences, Old Dominion University, Norfolk, VA 23508.

U.S. Dep. Agric.
Coop. Plant Pest Rep.
4(8):84, 1979

Pest Interceptions of Quarantine Significance at Ports of Entry

Plant Importation and Technical Support Staff
Plant Protection and Quarantine Programs, USDA

<u>Life Stage</u>	<u>Host</u>	<u>Probable Origin</u>	<u>Port of Entry</u>	<u>Desti-nation</u>
<u>Dacus dorsalis</u> Hendel oriental fruit fly Det. R. Kunishi	larval in pears from baggage	Hawaii	Kahului	AZ
<u>Epinotia aporema</u> (Walsingham) an olethreutid moth Det. D.M. Weisman	larval in <u>Phaseolus</u> seeds from baggage	Ecuador	Los Angeles	CA
<u>Metamasius</u> sp. a weevil Det. D.M. Anderson	larval in stems of bromeliads plants from cargo	Mexico	Los Angeles	CA
<u>Pieris brassicae</u> (Linnaeus) large white butterfly Det. D.M. Weisman	pupal on van of military household goods	Greece	Houston	TX
<u>Pseudococcus citriculus</u> Green a mealybug Det. S. Nakahara	adult on stems of <u>Codiaeum</u> plants from baggage	Philippines	Seattle	CA
<u>Scolytoplatus pubescens</u> (Alagedorn) a scolytid beetle Det. D.M. Anderson	adult in wood crates with polyvinyl-chloride sheeting	Republic of China	New York	NY
<u>Termes panamaensis</u> (Snyder) a termite Det. W.D. McLellan	adult on roots of <u>Brassavola</u> plants from cargo	Guatemala	New Orleans	LA
<u>Helicella maritima</u> (Draparnaud) a helicid snail Det. R. Munkittrick	adult on containers	Italy	McGuire AFB	VA

METRIC CONVERSION

1 cm = 0.393701 in
1 m = 3.28084 ft = 1.09361 yd
1 km = 0.621371 mi
1 sq cm = 0.155000 sq in
1 sq m = 10.7639 sq ft = 1.19599 sq yd
1 ha = 2.47104 acres
1 sq km = 0.386101 sq mi
1 kg = 2.20462 lb
1 t (metric ton) = 1.10231 short ton
1 kg/ha = 0.892183 lb/acre
1 t/ha = 0.446091 ton/acre

UNITED STATES DEPARTMENT OF AGRICULTURE
Animal and Plant Health Inspection Service
Hyattsville, Maryland 20782

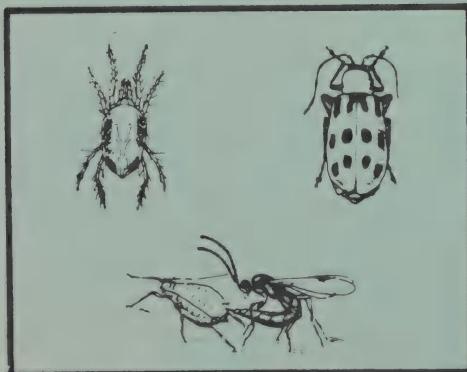
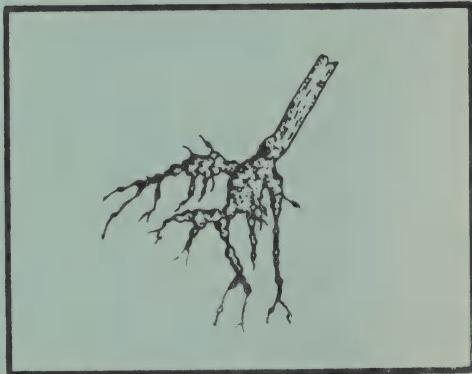
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4(9):87-96

Cooperative PLANT PEST REPORT



Animal
and Plant
Health
Inspection
Service

U.S.
DEPARTMENT
OF AGRICULTURE

This publication is distributed weekly to Federal and State agencies, universities, farmers, and others interested in containing or controlling pests in the United States.

Data included in this publication are compiled from reports submitted by cooperating State, Federal and other agricultural and industrial specialists. Accuracy of the reports is not verified prior to publication.

Cooperative Plant Pest Report supersedes *Cooperative Economic Insect Report*, which was discontinued with Volume 25, Numbers 49-52, 1975.

Correspondence should be directed to:

CPPR

New Pest Detection and Survey Staff
Plant Protection and Quarantine Programs
Animal and Plant Health Inspection Service
U.S. Department of Agriculture
Federal Building #1
Hyattsville, Maryland 20782

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COOPERATIVE ECONOMIC INSECT REPORT

HIGHLIGHTS

Current Conditions

ALFALFA WEEVIL larvae increased in southern area of New Mexico and central section of Florida. (p. 89).

Detection

New State record includes a CHRYSOMELID BEETLE in North Dakota. (p. 92).

For new county records see page 93.

Some First Occurrences of the Season

TARNISHED PLANT BUG in Indiana. EASTERN TENT CATERPILLAR in North Carolina. LADY BEETLES in Arkansas and Indiana.

Special Reports

Pests Not Known to Occur in the United States or of Limited Distribution. A STRIPED LEAF BEETLE, Medythia suturalis (Motschulsky). (p. 95-96).

Reports in this issue are for the week ending March 16 unless otherwise indicated.

CONTENTS

Corn, Sorghum, Sugarcane Insects.....	89	Deciduous Fruits and Nuts Insects.....	90
Small Grains Insects.....	89	Citrus Insects.....	90
Forage Legumes Insects.....	89	Ornamentals Insects.....	91
Cucurbits Insects.....	90	Forest and Shade Trees Insects.....	91
Beneficial Organisms and Their Enemies Insects.....	91		
Federal and State Programs Insects.....	92		
Hawaii Pest Report.....	92		
Detection.....	92		
Corrections.....	92		
Light Trap Collections.....	92		
Pest Interceptions of Quarantine Significance at Ports of Entry.....	94		
Pests Not Known to Occur in the United States or of Limited Distribution. A STRIPED LEAF BEETLE, <u>Medythia suturalis</u> (Motschulsky).....	95		

CORN, SORGHUM, SUGARCANE

INSECTS

POTATO STEM BORER (*Hydroecia micacea*) - NEW YORK - New county records taken in corn fields in 1978. (H.R. Willson).

District> County	Nearest City	Date	Collector	Determiner
W> Orleans	Kendall	Jun 13	H.R. Willson	H.R. Willson
W> Niagara	Somerset	Jun 13	H.R. Willson	H.R. Willson
N> Jefferson	La Fargeville	Jun 15	A. Rabideau	A. Muko
N> Lewis	Lowville	Jun 26	H. Yancey	H. Yancey
C> Herkimer	Little Falls	Jun 26	Unknown	J. Franclemont
C> Onondaga	Minoa	Unknown	E. Jennejohn	J. Franclemont

SMALL GRAINS

INSECTS

PEA APHID (*Acyrthosiphon pisum*) - ARIZONA - District> County= adults on wheat and barley: C> Maricopa= 300-500 per 100 sweeps and Pinal= 97 per 50 sweeps. (F. Brooks et al.).

RICE STINK BUG (*Oebalus pugnax*) - TEXAS - New county record. South Texas District> Atascosa County= adults collected in wheat field at Jourdanton, May 11, 1978, by L. Baesler and N. Moritz. Determined by R.L. Hodgdon. (J.A. Jackman).

FORAGE LEGUMES

INSECTS

ALFALFA WEEVIL (*Hypera postica*) - CALIFORNIA - District> County= larvae per 25 sweeps of commercial alfalfa: San Joaquin Valley> Fresno= 10 at Kerman. (H. Dunnegan). NEW MEXICO - District> County= counts on alfalfa: SE> Eddy and Chaves= widespread, populations increased; counts per terminal: Eddy= 1 at Malaga, 1.7 at Black River Village, 0.4 at Loving, 1.5 at Carlsbad, 0.7 at Happy Valley, and 1 at Otis. (L. Gholson). MISSOURI - District> County= populations in forage legumes: E> Washington= adults in only 1 field. (R.E. Munson).

NORTH DAKOTA - New county records for alfalfa weevil. District> County= adults found in alfalfa field in rural areas: SC> Emmons, SE> McIntosh, Logan, and C> Kidder= collected June 14, 1978; C> Sheridan= collected June 16. Collected and determined by W.J. Brandvik. (C.G. Scholl). INDIANA - District> County= SC> Harrison= adults taken March 13 in emergence traps placed in field March 12; more adults on ground. Little or no alfalfa growth except in sheltered spots in field where growth reached 1 cm. (R.W. Meyer). FLORIDA - District> County= counts on forage legumes: C> Alachua= larvae increased from 137 to about 1,450 per sweep and overwintering adults increased from 4 to 23 per 100 sweeps week of March 8. (F.W. Mead).

EGYPTIAN ALFALFA WEEVIL (*Hypera brunneipennis*) - ARIZONA - District> County= larval and adult counts on alfalfa: C> Pinal= 4-299 and 4-80 per 100 sweeps, C> Maricopa= 1-100 and 1-2 per 10 sweeps, and SW> Yuma= 5-12 and 2 per 10 sweeps. (L.G. Blackledge et al.).

PEA APHID (*Acyrthosiphon pisum*) - ARIZONA - District> County= counts on alfalfa: C> Pinal= various stages 74-739 per 25 sweeps, C> Maricopa= adults 10-70 per 10 sweeps, and SW> Yuma= adults 2-300 per 10 sweeps. (L.G. Blackledge et al.). NEVADA - District> County= counts on hay alfalfa: S> Clark= 20-40 per sweep in Moapa Valley. (Steffen). NEW MEXICO - District> County= infestations in alfalfa fields: SE> Lea= populations most severe in fields breaking dormancy early, infestation not widespread. Treatments applied to 5 fields with 15-20 aphids per stem in Lovington area. (L. Gholson).

TARNISHED PLANT BUG (*Lugus lineolaris*) - INDIANA - First of season. District> County= SC> Harrison= few active in alfalfa field. (R.W. Meyer).

LYGUS BUGS (*Lugus* spp.) - ARIZONA - District> County= counts on alfalfa: C> Pinal= nymphs 2-210 and adults 1-6 per 100 sweeps. (L.G. Blackledge et al.).

CUCURBITS

INSECTS

STRIPED CUCUMBER BEETLE (*Acalymma vittata*) - TEXAS - New county record. Lower Valley District> Willacy County= 3 adults collected on squash on farm at Lyford, September 19, 1977, by R. Garcia. Determined by S. Fishman. (J.A. Jackman).

DECIDUOUS FRUITS AND NUTS

INSECTS

EASTERN TENT CATERPILLAR (*Malacosoma americanum*) - NORTH CAROLINA - Southern Coastal Plain Area: Egg hatch began on wild cherry with southern exposures. Rapid hatch and subsequent larval feeding expected if weather predictions prevail. (T.N. Hunt).

PEAR PSYLLA (*Psylla pyricola*) - COLORADO - Some decrease due to overwintering mortality. Ranged 4-280 per 50 beats, averaged 2.39 per beat, of pear trees. Controls needed in all properties sampled to date. District> County= Western Slope> Mesa= tentative spray date March 15-20. (A.D. Bulla).

APPLE APHID (*Aphis pomi*) - OREGON - County= status on apples: Jackson= over-wintered eggs hatched, nymphs in orchards. (D. Berry).

WESTERN FLOWER THRIPS (*Frankliniella occidentalis*) - CALIFORNIA - District> County= populations in blooms of commercial nectarines: San Joaquin Valley> Fresno= light, 10 per 10 trees at Clovis. (H. Dunnegan).

CITRUS

INSECTS

CITRUS RED MITE (*Panonychus citri*) - CALIFORNIA - District> County= counts in commercial orange groves: San Joaquin Valley> Fresno= light, 2 per leaf at Sanger. (H. Dunnegan); infestations on dooryard lemons: Northern Coast> Humboldt= this species, CITRUS MEALYBUG (*Planococcus citri*), and OLEANDER SCALE (*Aspidiotus nerii*) heavy at Eureka. (Papp).

ORNAMENTALS

INSECTS

A WHITEFLY (Parabemisia myricae) - CALIFORNIA - New county record. District> County= Southern California> Santa Barbara= collected on Morus sp., Gardenia sp., Jacaranda sp., and Koelreuteria sp. at Carpinteria, November 16, 1978, by P. Okuye and W. Gillette. Determined by R. Gill. (R.T. Robbins).

LATANIA SCALE (Hemiberlesia lataniae) - CALIFORNIA - District> County= infestations on ornamental palm leaves: Southern California> San Diego= nymphs and adults heavy at San Diego. (Papp).

FOREST AND SHADE TREES

INSECTS

SPRUCE BUDWORM (Choristoneura fumiferana) - NORTH DAKOTA - New county record. SE District> Richland County= larvae collected on Picea pungens (Colorado spruce) in rural area near Hankinson, June 7, 1978, by C.G. Scholl. Determined by D. Kopp. (C.G. Scholl).

A SOFT SCALE (Toumeyella pinicola) - NORTH DAKOTA - New county record. SC District> Burleigh County= collected on Pinus mugo (mugo pine) on privately owned lot at Bismarck, May 3, 1974, by T. Hanson. Determined by R. Carlson and D.K. McBride. (C.G. Scholl).

SMALLER EUROPEAN ELM BARK BEETLE (Scolytus multistriatus) - NORTH DAKOTA - New county records. SE District> La Moure County= adults collected from sex attractant traps on Ulmus americana (American elm) at Dickey, June 22, 1978. Collected and determined by C.G. Scholl. SW District> Stark County= collected from sex attractant traps on U. americana near Belfield, August 10, 1978. Collected and determined by W.J. Brandvik. (C.G. Scholl).

NATIVE ELM BARK BEETLE (Hylurgopinus rufipes) - NORTH DAKOTA - New county records. WC District> Dunn, McKenzie, Mercer, Oliver Counties= and NW District> Williams County= collected on Ulmus americana (American elm) in rural area, June 5, 1978. Collected and determined by W.J. Brandvik. (C.G. Scholl).

SPRING CANKERWORM (Paleacrita vernata) - MISSOURI - First of season. District> County= C> Boone= male adult collected at Columbia, March 6. (R.E. Munson).

BENEFICIAL ORGANISMS & THEIR ENEMIES

INSECTS

CONVERGENT LADY BEETLE (Hippodamia convergens) - ARKANSAS - NW area: Overwintered adults active during recent warm weather; some egg laying occurred. (M.A. Mayse).

A LADY BEETLE (Cyclonedda sanguinea) - INDIANA - First of season. District> County= SC> Harrison= found in alfalfa field. (R.W. Meyer).

FEDERAL AND STATE PROGRAMS

INSECTS

SCREWWORM (*Cochliomyia hominivorax*) - No cases reported from continental United States February 18-24. Total of 224 cases confirmed in portion of Barrier Zone in Republic of Mexico February 4-24. Total of 249 cases reported in Mexico south of Barrier Zone. Number of sterile flies released February 18-24 totaled 27,251,200 as follows: Texas 20,197,000; Arizona 6,919,200; California 135,000. (J.E. Novy, M.E. Meadows).

HAWAII PEST REPORT

General Vegetables - CARMINE SPIDER MITE (*Tetranychus cinnabarinus*) infestations moderate to heavy on 0.2 ha of pole beans at KeaTakekua (Kona), Hawaii Island. Typical stippling and/or discoloration of leaves conspicuous. (E. Yoshioka). TOMATO PINWORM (*Keiferia lycopersicella*) infestations heavy in tomato and eggplant plantings at Anahola, Kauai. (D. Sugawa).

Fruits and Nuts - Moderate CITRUS SWALLOWTAIL (*Papilio xuthus*) infestations defoliated young terminals of backyard citrus trees at Hilo, Hawaii Island. Larvae up to 9 per 0.6-m plant. (E. Yoshioka).

Snail Pest - Noticeable infestations of GIANT AFRICAN SNAIL (*Achatina fulica*), specimens 3-10 cm long, around hotel and residences at Kahaluu (Kona), Hawaii Island. No foliar damage. This pest found during February at Kapaa and Waimea, Kauai, areas previously not known to be infested. Only 1 snail found at Waimea after baiting and surveys. Marked decrease in snail activity at Poipu, Kauai, as compared to same period during past 2-3 years. (E. Yoshioka, D. Sugawa).

LIGHT TRAP COLLECTIONS

ARIZONA - Mesa, 3/5-11, BL - BLACK CUTWORM (*Agrotis ipsilon*) 2, CABBAGE LOOPER (*Trichoplusia ni*) 6, VARIEGATED CUTWORM (*Peridroma saucia*) 185. MISSISSIPPI - Stoneville, 3/1-15, temp. 0.56-23° C, precip. 69.9 mm, 2 BL - ARMYWORM (*Pseudaletia unipuncta*) 7, black cutworm 2, variegated cutworm 10, YELLOW-STRIPED ARMYWORM (*Spodoptera ornithogalli*) 1. TEXAS - College Station, 3/8-14, BL Armyworm 3, black cutworm 0, cabbage Looper 0, CORN EARWORM (*Heliothis zea*) 0, FALL ARMYWORM (*S. frugiperda*) 15, SALTMARSH CATERPILLAR (*Estigmene acrea*) 0, TOBACCO BUDWORM (*H. virescens*) 0, TOBACCO HORNWORM (*Manduca sexta*) 0, TOMATO HORNWORM (*M. quinquemaculata*) 0, yellowstriped armyworm 0.

CORRECTIONS

CPPR 5(5-6):65 - SCREWWORM (*Cochliomyia hominivorax*) - add "Total of 575 cases reported in Mexico south of Barrier Zone January 14-27."

DETECTION

NEW STATE RECORD

INSECTS

A CHRYSOMELID BEETLE (*Dibolia reyheria*) - NORTH DAKOTA - SC District > Grant County = adult collected on Penstemon sp. on rangeland in rural area, May 21 and 22, 1966. Collected and determined by E. Balsbaugh, Jr. (C.G. Scholl).

NEW COUNTY RECORDS

INSECTS

ALFALFA WEEVIL (Hypera postica) - NORTH DAKOTA - Emmons, McIntosh, Logan, Kidder, and Sheridan. (p. 89).

A DIASPIDID SCALE (Abgrallaspis howardi) - FLORIDA - C District> Polk County= adult collected on twig of Ilex glabra (gallberry) shrub near Loughman, February 26, 1979, by K.C. Lowery and J.T. Felty. Determined by A.B. Hamon. (F.W. Mead).

A DIASPIDID SCALE (Aonidomytilus solidaginis) - FLORIDA - NW District> Gulf County= collected on stems of Baccharis halimifolia (eastern baccharis) plant in State park at Port Saint Joe, February 14, 1979, by K.C. Lowery and J.T. Felty. Determined by A.B. Hamon. (F.W. Mead).

GRAPE COLASPIS (Colaspis brunnea) - TEXAS - South Texas District> Maverick County= adult collected on alfalfa on farm, no town available, June 13, 1978, by T.E. Johnson. Determined by J.A. Wilcox. (J.A. Jackman).

NATIVE ELM BARK BEETLE (Hylurgopinus rufipes) - NORTH DAKOTA - Dunn, McKenzie, Mercer, Oliver, and Williams. (p. 91).

POTATO STEM BORER (Hydroecia micacea) - NEW YORK - Orleans, Niagara, Jefferson, Lewis, Herkimer, and Onondaga. (p. 89).

RICE STINK BUG (Oebalus pugnax) - TEXAS - Atascosa. (p. 89).

SMALLER EUROPEAN ELM BARK BEETLE (Scolytus multistriatus) - NORTH DAKOTA - LaMoure and Stark. (p. 91).

A SOFT SCALE (Toumeyella pinicola) - NORTH DAKOTA - Burleigh. (p. 91).

SOUTHERN CORN ROOTWORM (Diabrotica undecimpunctata howardi) - TEXAS - South Texas District> Zapata County= adult collected by sweeping sudangrass, no town available, April 14, 1978, by K.L. Esau. Determined by J.A. Wilcox. (J.A. Jackman).

SPRUCE BUDWORM (Choristoneura fumiferana) - NORTH DAKOTA - Richland. (p. 91).

SQUASH BUG (Anasa tristis) - TEXAS - Lower Valley District> Cameron County= adult collected on citrus on farm at Bluetown, August 30, 1977, by R. Garcia. Determined by S. Fishman. (J.A. Jackman).

STRIPED CUCUMBER BEETLE (Acalymma vittata) - TEXAS - Willacy. (p. 90).

A THrips (Liothrips ocellatus) - NORTH DAKOTA - SC District> Morton County= collected on grape at residence at Mandan, May 8, 1978, by M. Zuegar. Determined by G.L. Thomasson. (C.G. Scholl).

A WHITEFLY (Parabemisia myricae) - CALIFORNIA - Santa Barbara. (p. 91).

SLUGS AND SNAILS

A SNAIL (Rumina decollata) - TEXAS - South Texas District> Webb County= 15 adults collected behind flower bed at Laredo, February 15, 1979. Collected and determined by R.L. Hodgdon. (J.A. Jackman).

Pest Interceptions of Quarantine Significance at Ports of Entry

Plant Importation and Technical Support Staff
Plant Protection and Quarantine Programs, USDA

	<u>Life Stage</u>	<u>Host</u>	<u>Probable Origin</u>	<u>Port of Entry</u>	<u>Desti-nation</u>
<u>Aleurocanthus woglumi</u> Ashby citrus blackfly Det. S. Nakahara	pupal	on leaves of <u>Murraya</u> from baggage	India	Kennedy Airport	AZ
<u>Gerstaeckeria</u> sp. a weevil Det. J.M. Van	adult	in cactus plants from cargo	Mexico	Brownsville	TX
<u>Ips cembrae</u> (Heer) a scolytid beetle Det. D.M. Anderson	adult larva	in crating with aluminum coils	Italy	Charleston	NY
<u>Lampides boeticus</u> (Linnaeus) bean butterfly Det. D.M. Weisman	larval	in <u>Dolichos</u> pods from baggage	Bangladesh	Detroit	MI
<u>Limnobaris</u> sp. a weevil Det. D.R. Whitehead	adult	with Schomburgkia plants from cargo	Belize	New Orleans	FL
<u>Stenoma catenifer</u> (Walsingham) avocado seed moth Det. R.P. Higgins	larval	in avocados from baggage	Ecuador	Miami	FL
<u>Xylotrupes gideon</u> (Linnaeus) a scarab Det. R.D. Gordon	adult	with aquatic plants from cargo	Thailand	Los Angeles	CA
<u>Mycosphaerella</u> sp. a fungus Det. J.M. Van Valkenburg	imperfect	on leaves of <u>Beaucarnea</u> plants	Mexico	Brownsville	TX

PESTS NOT KNOWN TO OCCUR IN THE UNITED STATES
or of
Limited Distribution

A STRIPED LEAF BEETLE
Medythia suturalis (Motschulsky)

Coleoptera: Chrysomelidae

CONTRIBUTED BY: Richard E. White 1/

ECONOMIC IMPORTANCE

This beetle is a fairly serious pest on all kinds of peas and beans. Plants rarely die, but development is greatly slowed. Most plant species, except cowpeas (Vigna sp.), become immune to infestation with maturity. This species is frequently intercepted in commerce.



Medythia suturalis suturalis (Mots.) south China, (including Hainan Island), east India, Philippines, Ryukyu, Sunda Islands, Taiwan, and Vietnam.

Medythia suturalis nigrobilineatus (Mots.) north and central China (including Manchuria), Japan, Korea, and Soviet Union (southeast Siberia).

HOSTS

Almost all kinds of peas and beans.

1/ Systematic Entomology Laboratory, IIBIII, Federal Research, SEA, USDA. Mail address: c/o U.S. National Museum, Washington, DC 20560.

CHARACTERS

ADULT - Length about 2.3-3.5 mm; surfaces moderately shiny; body yellow-orange nearly throughout, antenna often mostly dark, head sometimes dark, each elytron with a dark brown to black, longitudinal, usually sinuous stripe, variable in development (maximum development shown in drawing); pronotum and elytra finely, not densely punctate; elytra lacking striae.

CHARACTERISTIC DAMAGE

The adult chews holes in the leaves of seedlings and later feeds on flower buds and pods.

DETECTION NOTES

1. The adult is active late in the evening, at night, and early in the morning. It hides as the sun rises and is rarely seen during the day; on occasion it may be found on plants with dense foliage, such as pigeonpea (Cajanus cajan (L.)).

2. Check for eggs and larvae at the base of host plants.

BIOLOGY

The biology for the domestic Cerotoma trifurcata (Forster) (bean leaf beetle) is given below due to the lack of biological data for M. suturalis in the literature. The biology for C. trifurcata is probably much the same as for M. suturalis and typical for chrysomelid bean feeders.

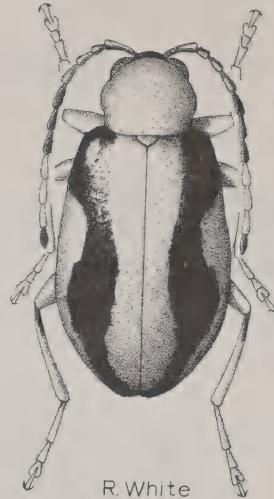
C. trifurcata adults overwinter in or near bean fields and feed on the plants as soon as they germinate. Adults feed on the undersides of leaves and generally drop when disturbed. Females lay their eggs in small clusters in the soil about the bases of the plants for about a month. The eggs hatch in 1-3 weeks, depending on the season. The slender white larvae find their way to the base of the stem or roots and feed for 3-6 weeks. When fully grown, the larva forms an earthen cell within which the white soft-bodied pupal stage is completed in about a week. In the Northern United States these adults constitute the overwintering population. The Southern States also have 1 or 2 partial generations. (Metcalf and Flint 1962).

REFERENCES

Ghosh, C.C. 1940. Insect pests of Burma. Rangoon: Superintendent of Government Printing and Stationery, Burma, 216 p.

Metcalf, C.L., and W.P. Flint. 1962. Destructive and useful insects, their habits and control, 4th ed. McGraw-Hill Book Company, Inc., New York. 1087 p.

No. 7 of Series



R. White

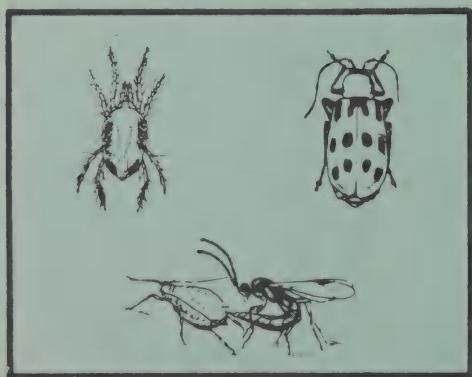
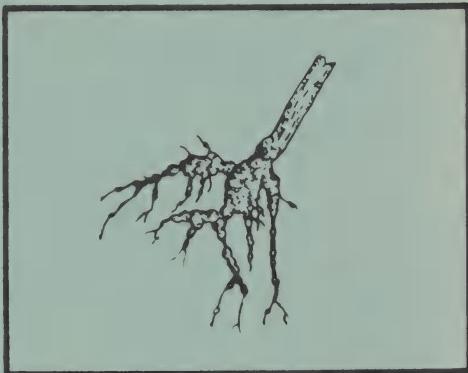
Medythia suturalis (Motschulsky), small figure equals actual size.

METRIC CONVERSION

1 cm = 0.393701 in
1 m = 3.28084 ft = 1.09361 yd
1 km = 0.621371 mi
1 sq cm = 0.155000 sq in
1 sq m = 10.7639 sq ft = 1.19599 sq yd
1 ha = 2.47104 acres
1 sq km = 0.386101 sq mi
1 kg = 2.20462 lb
1 t (metric ton) = 1.10231 short ton
1 kg/ha = 0.892183 lb/acre
1 t/ha = 0.446091 ton/acre

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This publication is distributed weekly to Federal and State agencies, universities, farmers, and others interested in containing or controlling pests in the United States.

Data included in this publication are compiled from reports submitted by cooperating State, Federal and other agricultural and industrial specialists. Accuracy of the reports is not verified prior to publication.

Cooperative Plant Pest Report supersedes *Cooperative Economic Insect Report*, which was discontinued with Volume 25, Numbers 49-52, 1975.

Correspondence should be directed to:

CPPR

New Pest Detection and Survey Staff

Plant Protection and Quarantine Programs

Animal and Plant Health Inspection Service

U.S. Department of Agriculture

Federal Building #1

Hyattsville, Maryland 20782

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COOPERATIVE PLANT PEST REPORT

HIGHLIGHTS

Current Conditions

SOIL-BORNE WHEAT MOSAIC VIRUS prevalent on wheat in parts of west-central, central, and north-central areas of Oklahoma. (p. 99).

Five or more ARMY CUTWORM larvae on wheat in some spots in west-central and panhandle areas of Oklahoma. (p. 100). Problems on alfalfa in west-central and northwestern parts of Oklahoma. (p. 101).

ALFALFA WEEVIL larvae economic on alfalfa in central area of Florida. (p. 100-101).

Prediction

CHINCH BUG damage to sorghum expected to be more frequent this year in Kansas. (p. 99).

Detection

New State records include a CHRYSOMELID BEETLE in North Dakota and two SPIDERS in Florida. (p. 105).

For new county records see page 105.

Some First Occurrences of the Season

BLACK CUTWORM males in Missouri. ALFALFA CATERPILLAR, HORN FLY, and FACE FLY in Oklahoma. SPRING CANKERWORM in Minnesota. A MOSQUITO in Indiana. LONE STAR TICK, SUBTERRANEAN TERMITES, and an APHIDIID WASP in Oklahoma.

Reports in this issue are for the week ending March 23 unless otherwise indicated.

CONTENTS

Corn, Sorghum, Sugarcane	Sugar Beets
Diseases.....99	Insects.....102
Insects.....99	
Small Grains	Deciduous Fruits and Nuts
Diseases.....99	Insects.....102
Insects.....100	
Forage Legumes	Citrus
Insects.....100	Insects.....102
Soybeans	Forest and Shade Trees
Diseases.....102	Insects.....102
Peanuts	Man and Animals
Diseases.....102	Insects.....103
	Households and Structures
	Insects.....103
Beneficial Organisms and Their Enemies	
Insects.....	103
Federal and State Programs	
Insects.....	104
Hawaii Pest Report.....	104
Detection.....	105
Corrections.....	104
Light Trap Collections.....	106
Pest Interceptions of Quarantine Significance at Ports of Entry.....	107

CORN, SORGHUM, SUGARCANE

DISEASES

A NEMATODE (*Pratylenchus* sp.) - OKLAHOMA - District> County= counts per 100 ml of soil in 2 sorghum fields week ending March 16: Panhandle> Texas= 26-140 nematodes. (K.E. Conway).

INSECTS

BEET ARMYWORM (*Spodoptera exigua*) - FLORIDA - Increased from last period. District> County= adults in pheromone traps in corn area: C> Alachua= from 3-5 per week to 7-9 per night at Alachua. (F.W. Mead).

BLACK CUTWORM (*Agrotis ipsilon*) - MISSOURI - First of season. District> County= adults in pheromone traps in corn: C> Boone and NE> Ralls= 12 males. (R.E. Munson).

A DELPHACID PLANTHOPPER (*Saccharosydne saccharivora*) - FLORIDA - New county record. District> County= adult in oat field: C> Alachua= 1 male collected at Gainesville 0.40 km from site where experimental sugarcane grown in 1978 at research station, March 19, 1979. Collected and determined by F.W. Mead. (F.W. Mead).

CHINCH BUG (*Blissus leucopterus leucopterus*) - KANSAS - Damage to sorghum expected more often in 1979 than in 1978 if population does not decrease, especially where sorghum borders wheat or is planted after wheat. Populations in central area threatening farther west than in 1978. District> County= averages per 0.09 sq m (compared with 1978 averages) of bunchgrass for 1979 survey conducted from late February to mid-March: NC> Clay= 3,742 (5,942), Cloud= 828 (1,234), Jewell= 40 (221), Mitchell= 280 (143), Osborne= 6, Ottawa= 299 (94), Republic= 828 (600), and Washington= 3,327 (10,487); C> Dickinson= 2,713 (1,109), Ellsworth= 251 (121), Lincoln= 69 (30), McPherson= 1,950 (2,903), Marion= 3,044 (2,409), Rice= 244 (191), Russell= 343 (6), and Saline= 412 (638); SC> Harvey= 2,622 (6,771), Kingman= 24 (2), Reno= 330 (219), Sedgwick= 2,003 (434), Sumner= 177 (33), and Harper= 54 (4); NE> Atchison= 1,745 (346), Brown= 6,521 (917), Doniphan= 191 (196), Jackson= 1,857 (3,127), Jefferson= 668 (1,693), Leavenworth= 240 (20), Marshall= 3,658 (15,454), Nemaha= 1,898 (10,255), Pottawatomie= 2,144 (3,796), and Riley= 4,210 (4,215); EC> Anderson= 614 (8), Chase= 1,913 (95), Coffey= 1,276 (487), Douglass= 465 (192), Franklin= 1,819 (50), Geary= 513 (622), Johnson= 135 (10), Linn= 1,496 (168), Lyon= 1,542 (37), Miami= 821 (163), Morris= 1,588 (367), Osage= 1,088 (271), Shawnee= 255 (226), and Wabaunsee= 650 (75); and SE> Allen= 389 (23), Bourbon= 946 (191), Butler= 543 (453), Chautauqua= 8 (69), Cherokee= 4,280 (25), Cowley= 128 (18), Crawford= 627 (71), Elk= 71 (9), Greenwood= 341 (28), Labette= 1,743 (345), Montgomery= 142 (43), Neosho= 1,374 (7), Wilson= 1,690 (73), and Woodson= 726 (44). (K.O. Bell, Jr.).

SMALL GRAINS

DISEASES

SOIL-BORNE WHEAT MOSAIC VIRUS - OKLAHOMA - District> County= prevalence/ severity on wheat: WC> Blaine, C> Kingfisher, Logan, Payne, NC> Noble and Kay= 80%/3-90%, and NC> Garfield and Grant= none reported. (R.V. Sturgeon, Jr.).

INSECTS

ARMY CUTWORM (Euxoa auxiliaris) - OKLAHOMA - District> County= counts per 0.3 row m of wheat week ending March 16: WC> Custer and Washita= up to 5 in some areas, averaged 1 or 2 in many fields; and Dewey= up to 5 in some spots; SW> Jackson= averaged less than 0.5; and C> Logan, Kingfisher, and Payne= ranged 0.1-0.4. Week ending March 23: Panhandle> Texas and Beaver= 5-6 in spots in scattered fields, C> Logan, SW> Jackson, Greer, and Harmon= light, 0.1-0.2 in several fields. (D.C. Arnold).

KANSAS - District> County= army cutworm in wheat fields: SW> Clark= not more than 1 per 0.3 row m, slight damage southeast of Ashland (M.L. Shuman), some wheat treated (H.L. Brooks, M.L. Shuman), Hodgeman and Stanton= some damage in 1 field each (H.L. Brooks, D.E. Mock), SC> Edwards= averaged 0.5-0.6 per 0.3 row m in 2 fields [5-9 tiller], and Comanche= averaged 0.1 per 0.3 m in 1 field [5 tiller] (G.A. Salisbury).

GREENBUG (Schizaphis graminum) - TEXAS - District> County= maximum per 0.3 row m of small grains March 12: Cross Timbers> Archer= 1, Southern Low Plains> Baylor= 1, and Northern Low Plains> Wilbarger= 6; counts per 0.3 row m: Northern Low Plains> Foard= 0-9. (E.P. Boring, III).

PEA APHID (Acyrthosiphon pisum) - ARIZONA - District> County= adults on wheat and barley: C> Maricopa= 2-50 per 50 sweeps and Pinal= 279 per 100 sweeps. (L.G. Blackledge et al.).

AN APHID (Rhopalosiphum padi) - ARIZONA - District> County= counts per 100 sweeps of wheat and barley: C> Pinal= various stages 116. (L.G. Blackledge et al.). TEXAS - District> County= counts per 0.3 row m of small grains March 12: Northern Low Plains> Foard= 0-4. (E.P. Boring, III).

WINTER GRAIN MITE (Penthaleus major) - TEXAS - District> County= counts per 0.3 row m of small grains March 12: Northern Low Plains> Foard= 1-2. (E.P. Boring, III).

FORAGE LEGUMES

INSECTS

ALFALFA WEEVIL (Hypera postica) - NEW MEXICO - District> County= status on alfalfa: SE> Dona Ana= larvae widespread and damage to terminal growth becoming evident. Larvae 2-6 per 25 sweeps on 30-80% of terminals in 25 fields, treatment underway, larvae in Hatch area mostly 1st and 2nd instars and 1st through 3rd instars in area from Las Cruces to Anthony (B. Campbell et al.); Otero= treatment began in Tularosa and Dell City areas; Chaves and Eddy= treatment continued in Pecos Valley; Eddy= hatch of spring-laid eggs began in Artesia area (L. Gholson).

TEXAS - District> County= alfalfa weevil larvae per stem of alfalfa [growth stage]: Trans-Pecos> El Paso= 0.2-0.8, Hudspeth= 0.2-3 [8 to 10-cm stems] at Dell City, heavy in ungrazed fields, and Pecos= 0.3-2 [5 to 8-cm stems] at Imperial and 0.2-3 at Bakersfield. (C.W. Neeb).

OKLAHOMA - First alfalfa weevil larvae of season. District> County= egg averages per 0.09 sq m of alfalfa March 8: SC> Stephens= 203.4, C> Grady= 25, and Payne= 31.4; March 14: Stephens= 26-43 and Grady= averaged 7, many in "black head" stage. Larvae week ending March 16: Stephens= 1-2 per terminal in 5-30% of terminals, SW> Jackson= larvae averaged 6 per 0.09 sq m, and Grady= none. Current larval-infested alfalfa terminals: Stephens= 13-53%; Grady= averaged 3%, many larvae newly hatched; and EC> Wagoner= none in 2 fields. (D.C. Arnold).

MISSOURI - District> County= alfalfa weevil egg averages per 0.09 sq m of forage legumes: E> Washington= 119.5 and C> Boone= 77.3 and 19.3. (R.E. Munson). INDIANA - District> County= larval infestation in alfalfa: SC> Harrison and Washington= 1st instar infested less than 4% [new growth averaged 2.6-3.2 cm about 1 week ahead of 1978 levels]; averages in field: Harrison= eggs 50+ per 15 sq cm March 13 (not significantly lighter than in 1978 fall survey) and 96 per 15 sq cm March 21. Adults 1+ per 30 sq cm March 13. (R.W. Meyer).

NORTH CAROLINA - Alfalfa weevil damage expected to increase rapidly if temperature stays in 20° C range. Northern and central Piedmont areas: larvae increased. District> County= percent alfalfa tips infested in samples from 5 fields: Northern Mountain> Wilkes; Southern Piedmont> Lincoln; Central Piedmont> Rowan and Wake= 40%. (T.N. Hunt). FLORIDA - District> County= continued to increase on alfalfa: C> Alachua= larvae about 2,100 and adults 16 per 100 sweeps, caused considerable leaf damage at Gainesville. (F.W. Mead).

EGYPTIAN ALFALFA WEEVIL (*Hypera brunneipennis*) - ARIZONA - District> County= counts on alfalfa per 100 sweeps: C> Maricopa= larvae 30-860 and adults 4-20; and SW> Yuma= larvae 8-600 and adults 20-170. (L.G. Blackledge et al.).

ARMY CUTWORM (*Euxoa auxiliaris*) - OKLAHOMA - District> County= counts in fall-seeded alfalfa week ending March 16: WC> Custer= up to 8 per 0.09 sq m, completely destroyed 12-ha field and Custer and Washita= averaged about 1 per 0.09 sq m in several older fields. Current counts per 0.09 sq m of alfalfa: NW> Harper= heavy in Ditch Valley area, Woodward= averaged 5 in established field, and small area in eastern Woodward and western Major= 0-12 on established alfalfa; larvae prevented growth, treatments applied. Light damage in fall-planted fields in same area. WC> Washita and Beckham= larvae up to 7 per 0.3 row m of fall-planted alfalfa, not heavy in established alfalfa; destroyed 7.3-ha field in former county and 10-ha field in latter county. (D.C. Arnold).

KANSAS - District> County= army cutworm status per 0.09 sq m of seedling alfalfa: NC> Edwards= larvae averaged 11 in 1 field, damage serious, and Comanche= 0, 1.0, and 8 in 3 fields [3 cm (tall)], respectively; latter infestation destroyed about 90% of plants to ground, some fields south of Protection satisfactorily treated. (G.A. Salsbury).

ALFALFA CATERPILLAR (*Colias eurytheme*) - OKLAHOMA - First of season. District> County= collected from alfalfa: WC> Custer= taken March 16 and Washita and Beckham= light week ending March 23. (D.C. Arnold).

PEA APHID (*Acyrthosiphon pisum*) - ARIZONA - District> County= various stages on alfalfa: C> Maricopa= 38-60 per 10 sweeps, Pinal= 637 per 100 sweeps; and SW> Yuma= 75-2,400 per 100 sweeps. (L.G. Blackledge et al.). NEW MEXICO - Beneficial insects kept populations below economic levels in many fields. (L. Gholson). District> County= pea aphid adults and nymphs per 25 sweeps in alfalfa fields: SE> Dona Ana= 5-100+, heaviest in southern areas. (B. Campbell, G. Nielsen). TEXAS - District> County= counts per alfalfa stem: Trans-Pecos> Hudspeth= 30-60 and Pecos= 30-60 at Bakersfield. (C.W. Neeb).

SOYBEANS

DISEASES

A LESION NEMATODE (Pratylenchus sp.) - OKLAHOMA - District> County= nematodes per 100 ml of soil in 3 soybean fields week ending March 16: EC> Sequoyah= 4-324. (K.E. Conway).

A STUNT NEMATODE (Tylenchorhynchus sp.) - OKLAHOMA - District> County= nematodes per 100 ml of soil in 3 soybean fields week ending March 16: EC> Sequoyah= 12,208. (K.E. Conway).

PEANUTS

DISEASES

A SPIRAL NEMATODE (Helicotylenchus sp.) - OKLAHOMA - District> County= nematodes per 100 ml of soil in peanut field week ending March 16: EC> Hughes= 4-52 (K.E. Conway); currently: SC> Carter= 4 and 44 in 2 fields. (R.V. Sturgeon, Jr.).

A SPINE NEMATODE (Criconema sp.) - OKLAHOMA - District> County= nematodes per 100 ml of soil in 6 peanut fields: SC> Carter= 4-192. (R.V. Sturgeon, Jr.).

SUGAR BEETS

INSECTS

GREEN PEACH APHID (Myzus persicae) - ARIZONA - District> County= various stages on sugar beets: C> Maricopa= 3-80 per leaf and Pinal= 642 per 100 sweeps. (L.G. Blackledge, F. Brooks).

DECIDUOUS FRUITS AND NUTS

INSECTS

WESTERN TENT CATERPILLAR (Malacosoma californicum) - OREGON - County= larvae on flowering cherry: Multnomah= 1st instar hatched at April Hill Park. (R.L. Penrose).

CITRUS

INSECTS

CITRUS THIRIPS (Scirtothrips citri) - CALIFORNIA - District> County= nymphs on commercial lemons and grapefruit: Southern California> San Diego= active, 6 per stem in Borrego Valley. (Rys, Bixby). ARIZONA - District> County= population in citrus trees: SW> Yuma= adults 20 and nymphs 20 per 20 trees. (C. Berens).

FOREST AND SHADE TREES

INSECTS

A LYGAEID BUG (Lygaeus belfragei) - OKLAHOMA - New county record. District> County= collected from red-cedar: SC> Stephens= at Comanche, March 15, 1972. Collected and determined by D.C. Arnold. (D.C. Arnold).

SPRING CANKERWORM (Paleacrita vernata) - MINNESOTA - First of season. District> County= adult collected: EC> Ramsey= male near State office building. (D.D. Sreenivasam).

AN APHID (Myzocallis agrifolicola) - CALIFORNIA - New county record. District> County= collected on Quercus virginiana (live oak): Central Coast> Monterey= near Carmel Valley, November 8, 1978, by B. Oliver. Determined by T. Kono. ~ (T. Kono).

AN ADELGID (Adelges tsugae) - VIRGINIA - New county record. District> County= egg masses on Tsuga sp. (hemlock): Northern> Arlington= collected January 19, 1979 (no city data) by C.G. Bruce. Determined by J.A. Weidhaas, Jr. (J.L. Garner).

MAN AND ANIMALS

INSECTS

HORN FLY (Haematobia irritans) - OKLAHOMA - First of season. District> County= status on cattle March 8: SE> McCurtain= active in southern area. (D.C. Arnold). FLORIDA - Population increased. District> County= adult average per head in small beef herd: C> Alachua= 130 at Newberry. (F.W. Mead).

FACE FLY (Musca autumnalis) - OKLAHOMA - First of season. District> County= activity in and around residence March 8: NE> Osage= heavy in Shidler area. (D.C. Arnold).

A MOSQUITO (Culiseta inornata) - INDIANA - First of season. District> County= adult in mosquito trap March 17-18: WC> Tippecanoe= 1 female in apple tree at West Lafayette, overwinters as adult. (R.W. Meyer).

LONE STAR TICK (Amblyomma americanum) - OKLAHOMA - First of season. District> County= population on bull week ending March 16: SE> McCurtain= about 100 adults, some replete. (D.C. Arnold).

HOUSEHOLDS AND STRUCTURES

INSECTS

SUBTERRANEAN TERMITES (Reticulitermes spp.) - OKLAHOMA - First of season. District> County= winged reproductives swarming March 9: SC> Bryan= inside home at Durant; March 18: Panhandle> Texas= outdoors at Guymon. (D.C. Arnold).

BENEFICIAL ORGANISMS & THEIR ENEMIES

INSECTS

AN APHIDIID WASP (Lysiphlebus testaceipes) - OKLAHOMA - First of season. District> County= population in wheat field March 14: C> Logan= occasional adult, no Schizaphis graminum (greenbug) or other aphids found. (D.C. Arnold).

AN ICHNEUMONID WASP (Bathyplectes curculionis) - FLORIDA - District> County= collected in 100 sweeps of alfalfa infested by Hypera postica (alfalfa weevil): C> Alachua= 10 male and 1 female wasps at Gainesville. (F.W. Mead).

COMMON GREEN LACEWING (*Chrysopa carnea*) - INDIANA - District> County= adults in mosquito trap: WC> Tippecanoe= 68 in apple tree at West Lafayette, 2+ times total population for 1977 and 1978 in same trap at same location. (R.W. Meyer).

PUNCTUREVINE SEED WEEVIL (*Microlarinus lareynii*) - OKLAHOMA - New county record. District> County= Larvae in puncturevine seed: C> Kingfisher= moderate at Lace, September 8, 1978. Collected and determined by D.C. Arnold. (D.C. Arnold).

FEDERAL AND STATE PROGRAMS

INSECTS

CITRUS BLACKFLY (*Aleurocanthus woglumi*) - FLORIDA - District> County= infested mango tree March 13: S> Dade= larvae and pupae on leaf in northwest Miami area. (F.W. Mead).

GRASSHOPPERS - TEXAS - District> County= nymphs per 0.8 sq m in alfalfa field margins: Trans-Pecos> Hudspeth= 2-6 at Dell City. (C.W. Neeb).

SCREWWORM (*Cochliomyia hominivorax*) - No cases reported from continental United States February 25 to March 3. Total of 131 cases confirmed in portion of Barrier Zone in Republic of Mexico. Number of sterile flies released this period totaled 28,412,800 as follows: Texas 19,995,800; Arizona 8,282,000; California 135,000. Total of 80,116,200 sterile flies released within Barrier of Mexico, February 18-24. (J.E. Novy, M.E. Meadows).

HAWAII PEST REPORT

General Vegetables - ONION THrips (*Thrips tabaci*) infestations heavy on 0.61 ha of bulb onion at Mikilua, Oahu Island. (L. Nakahara).

Ornamentals - First host record for a LEAFHOPPER (*Gyponana germari*) in State. All stages collected on asystasia at Waialae, Oahu, March 9, 1979, by L. Nakahara. Determined by S. Higa. (L. Nakahara).

CORRECTIONS

CPPR 5(8):85 - Scolytoplatus pubescens (Alagedorn) should read Scolytoplatus pubescens (Hagedorn).

DETECTION

NEW STATE RECORDS

INSECTS

AN ATTID SPIDER (*Icius hartii*) - FLORIDA - District> County= adult collected in building: C> Alachua= at Gainesville, June 19, 1978. Collected and determined by G.B. Edwards. (F.W. Mead).

A CHRYSOMELID BEETLE (*Dibolia borealis*) - NORTH DAKOTA - District> County= on Plantago major in rural areas: WC> Dunn= collected August 3, 1965, by M.W. Kotchman. Determined by E. Balsbaugh, Jr. (C.G. Scholl).

A SCYTODID SPIDER (*Scytodes thoracica*) - FLORIDA - District> County= adult collected in building: C> Alachua= at Gainesville, March 13, 1979. Collected and determined by G.B. Edwards. (F.W. Mead).

NEW COUNTY RECORDS

INSECTS

AN ADELGID (*Adeiges tsugae*) - VIRGINIA - Arlington. (p. 103).

AN ANT (*Formica pallidefulva pallidefulva*) - OKLAHOMA - District> County= collected around home: SC> Jefferson= at Waurika, May 15, 1978, by S. Reedy. Determined by K.N. Pinkston. (D.C. Arnold).

AN APHID (*Myzocallis agrifolicola*) - CALIFORNIA - Monterey. (p. 103).

A CHRYSOMELID BEETLE (*Dibolia borealis*) - NORTH DAKOTA - District> County= on Plantago major in rural areas: SW> Billings= June 4, 1967, and NC> Rolette= June 4, 1968. Both collected by M.W. Kotchman. SE> Richland= May 27, 1971, by W.J. Brandvik. All determined by E. Balsbaugh, Jr. (C.G. Scholl).

A DELPHACID PLANTHOPER (*Saccharosydne saccharivora*) - FLORIDA - Alachua. (p. 99).

A LYGAEID BUG (*Lygaeus belfragei*) - OKLAHOMA - Stephens. (p. 102). District> County= no host data: C> Payne= 2 collected at Stillwater, August 11, 1965, and August 11, 1966, by C.L. Bailey. Determined by D.C. Arnold. (D.C. Arnold).

PUNCTUREVINE SEED WEEVIL (*Microlarinus lareynii*) - OKLAHOMA - Kingfisher. (p. 104).

A WALKINGSTICK (*Diapheromera persimilis*) - OKLAHOMA - District> County= light numbers swept from roadsides near pasture, August 2, 1978; NE> Tulsa= at Key-
stone State Park near Sand Springs and C> Creek= at junction of State Highways 51 and 99. Both collected and determined by D.C. Arnold. (D.C. Arnold).

A WALKINGSTICK (*Diapheromera velii*) - OKLAHOMA - District> County= several adults swept from roadside near pasture: SC> Carter= in Fox area, June 28, 1978. Collected and determined by D.C. Arnold. (D.C. Arnold).

WALNUT HUSK FLY (*Rhagoletis completa*) - UTAH - District> County= collected by sweeping: E> Uintah= at Whiterocks, no host data, April 27, 1966, by G.F. Knowlton. Determined by R.H. Foote. (J.B. Karren).

LIGHT TRAP COLLECTIONS

Pest Interceptions of Quarantine Significance at Ports of Entry

Plant Importation and Technical Support Staff
Plant Protection and Quarantine Programs, USDA

<u>Life Stage</u>	<u>Host</u>	<u>Probable Origin</u>	<u>Port of Entry</u>	<u>Destination</u>
uredial	on leaf with seeds of <u>Hemarthria</u> from mail	Argentina	Beltsville	TX
larval	on leaves of <u>Ruta</u> from baggage	Greece	Chicago	IL
larval	on stems of <u>Pinus</u> plants from baggage	Japan	Kennedy Airport	NY
larval adult	in palm seedlings from cargo	Netherlands	Miami	FL
adult	in wood crates of manhole covers	India	Savannah	GA
larval	in eggplant from baggage	Nigeria	Kennedy Airport	CA
adult	on leaves of <u>Phalaenopsis</u> plants from cargo	Philippines	Kennedy Airport	NY
adult	in wood crates with potassium persulfate	West Germany	New Orleans	LA

Cacoecimorpha pronubana (Hübner)
a tortricid moth
Det. D.M. Weisman

Cecidomyia pini (De Geer)
a cecidomyiid midge
Det. R.J. Gagné

Hypocryphalus sp.
a scolytid beetle
Det. R.P. Higgins

Leucinodes orbonalis (Guenée)
eggplant fruit borer
Det. M. Schuble

Lindingaspis tincta McKenzie
a diapsid scale
Det. S. Nakahara

Pityogenes chalcographus (Linnaeus)
a scolytid beetle
Det. D.M. Anderson

METRIC CONVERSION

1 cm = 0.393701 in
1 m = 3.28084 ft = 1.09361 yd
1 km = 0.621371 mi
1 sq cm = 0.155000 sq in
1 sq m = 10.7639 sq ft = 1.19599 sq yd
1 ha = 2.47104 acres
1 sq km = 0.386101 sq mi
1 kg = 2.20462 lb
1 t (metric ton) = 1.10231 short ton
1 kg/ha = 0.892183 lb/acre
1 t/ha = 0.446091 ton/acre

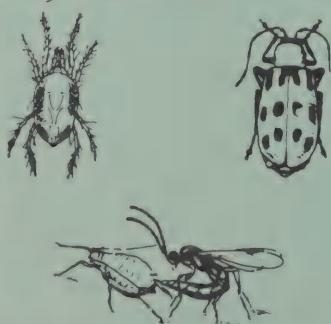
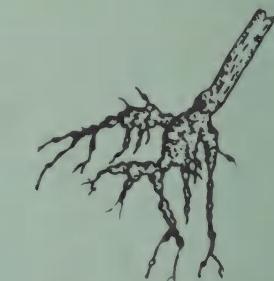
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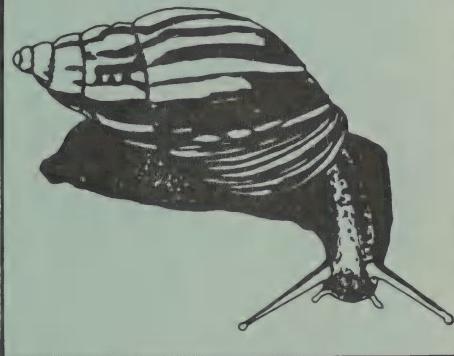
Cooperative PLANT PEST REPORT

U.S.
DEPARTMENT
OF AGRICULTURE

Apr 6, 1979
Vol. 4

Animal
and Plant
Health
Inspection
Service

No. 11



This publication is distributed weekly to Federal and State agencies, universities, farmers, and others interested in containing or controlling pests in the United States.

Data included in this publication are compiled from reports submitted by cooperating State, Federal and other agricultural and industrial specialists. Accuracy of the reports is not verified prior to publication.

Cooperative Plant Pest Report supersedes *Cooperative Economic Insect Report*, which was discontinued with Volume 25, Numbers 49-52, 1975.

Correspondence should be directed to:

CPPR

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Hyattsville, Maryland 20782

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COOPERATIVE PLANT PEST REPORT

HIGHLIGHTS

Current Conditions

Treatments applied for ALFALFA WEEVIL on alfalfa in southeastern area of New Mexico. (p. 111-112).

Controls difficult for DIAMONDBACK MOTH on cabbage in central area of Florida. (p. 113).

Detection

New State records include a WHITEFLY in Florida (p. 113) and a CYST NEMATODE in Kansas (p. 115).

For new county and island records see pages 115-116.

Some First Occurrences of the Season

CORN EARWORM eggs in Florida. CABBAGE MAGGOT adults in New York. EASTERN SUBTERRANEAN termite in Maryland. An ICHNEUMONID WASP and GRASSHOPPERS in Oklahoma.

Special Reports

Summary of Pest Conditions in the United States - 1978

Introduction (p. 119).

Corn, Sorghum, Sugarcane (p. 119-139).

Small Grains (p. 139-147).

Turf, Pastures, Rangeland (p. 148).

Reports in this issue are for the week ending March 30 unless otherwise indicated.

CONTENTS

Corn, Sorghum, Sugarcane Insects.....	111
Small Grains Diseases..... Insects.....	111
Forage Legumes Insects.....	111
Sugar Beets Diseases.....	112
Potatoes, Tomatoes, Peppers Insects.....	113
Cole Crops Insects.....	113
Beneficial Organisms and Their Enemies Insects.....	114
Federal and State Programs Insects.....	114
Hawaii Pest Report.....	115
Detection.....	115
Light Trap Collections.....	117
Pest Interceptions of Quarantine Significance at Ports of Entry.....	118
Summary of Pest Conditions in the United States - 1978	
Introduction.....	119
Corn, Sorghum, Sugarcane Diseases..... Insects.....	122
Small Grains Diseases..... Insects.....	139
Turf, Pastures, Rangeland Insects.....	142
	148

CORN, SORGHUM, SUGARCANE

INSECTS

CORN EARWORM (Heliothis zea) - FLORIDA - First eggs of season. District> County= status on young sweet corn [13 cm tall] field: C> Alachua= eggs began to appear at Alachua; adults of this species, FALL ARMYWORM (Spodoptera frugiperda), and BEET ARMYWORM (S. exigua) unchanged in pheromone trap catches. (F.W. Mead).

SOUTHERN CORN ROOTWORM (Diabrotica undecimpunctata howardi) - TEXAS - New county record. District> County= adult collected on corn: SC> Medina= 1.6 km east of Castroville, July 17, 1978, by N.M. Moritz. Determined by R.L. Hodgdon. (J.A. Jackman).

SMALL GRAINS

DISEASES

SOIL-BORNE WHEAT MOSAIC VIRUS - OKLAHOMA - District> County= prevalence of symptoms on wheat varieties: NC> Kay= none on 'Newton', up to 90% in some fields of 'Vona' and 'Tam 101' (a vector, Polymyxa graminis (a primitive root fungus) also present), Major= none on 'Triumph 64' (P. graminis light), Garfield= present on 'Vona'; SW> Cotton= stunting none to severe on 'Tam 101' (P. graminis absent to present); C> Logan= present on 'Osage' (P. graminis present) and 'Centurk' (P. graminis none), and none on 'Payne' (P. graminis present); NE> Pawnee= present on 'Tam 101'; Wagoner= about 40% in 1 field and 60-70% in another field of 'Tam 101'. (K.E. Conway et al.).

NEMATODES - OKLAHOMA - Counts of a RING NEMATODE (Criconema sp.), a PIN NEMATODE (Paratylenchus sp.), a LESSON NEMATODE (Pratylenchus sp.), a STUNT NEMATODE (Tylenchorhynchus sp.), and a DAGGER NEMATODE (Xiphinema sp.), respectively, per 100 ml of soil on wheat varieties: District> County= NC> Kay= no data, 4-132, 4-16, 4-12, 4-16; SW> Cotton= 60 on 'Tam 101', no data, 4 and 16 on 'Tam 101', 20 and 88 on 'Tam 101'; C> Logan= no data, 14 on 'Osage', no data, 12 on 'Osage', no data. (K.E. Conway et al.).

INSECTS

ARMY CUTWORM (Euxoa auxiliaris) - OKLAHOMA - District> County= counts per 0.3 row m of wheat: SW> Greer= averaged 12 in 1 field and NC> Grant= 1-3 in 1 field in Pond Creek area. (D.C. Arnold).

THREELINED POTATO BEETLE (Lema trilineata) - TEXAS - New county record. District> County= adult collected on oats: SC> Bexar= at Buena Vista, April 26, 1978, by L. Beikman. Determined by R. White. (J.A. Jackman).

PEA APHID (Acyrtosiphon pisum) - ARIZONA - District> County= adults and immatures per 100 sweeps of barley and wheat: C> Pinal= 385. (F. Brooks).

FORAGE LEGUMES

INSECTS

ALFALFA WEEVIL (Hypera postica) - NEW MEXICO - District> County= status on alfalfa: SE> Lea= larval populations remained constant, infested 15-20% of stems in Hobbs and Lovington area; Eddy= treatment continued in infested fields

in Carlsbad and Artesia areas, alfalfa weevil populations increased and egg hatch continued, infested stems 20-90%; Chaves= damage evident in Roswell area, treatment begun. (L. Gholson). OKLAHOMA - District> County= eggs per 0.09 sq m March 22, current percentage of infested terminals, adults, and larvae, respectively, on forage legumes: SC> Stephens= 43-86, 23-67%, 6-25 per 100 sweeps, up to 50 per 0.09 sq m, Garvin= no data, no data, no data, 0%, 0, 0-30 per 30 stems; C> Grady= averaged 10, averaged 13%, averaged 2 per 100 sweeps, 10-15 per 0.09 sq m. (D.C. Arnold).

MISSOURI - Area> alfalfa weevil status on forage legumes: Central and northern> adult activity stopped due to cold temperature and snow; southeastern> eggs 0-8 per 0.09 sq m. (R.E. Munson). NORTH CAROLINA - District> County= status on alfalfa: Northern Mountain> Wilkes; Southern Piedmont> Lincoln; Central Piedmont> Iredell and Randolph= higher elevation tip infestations less than 10%; warm temperatures at lower elevation allowed rapid development, infested 60% of tips in 3 of 5 fields, hatch completed. (T.N. Hunt). MARYLAND - Area> time of egg hatch on alfalfa: Eastern Shore> expected within 2 weeks; and Central> within 3 weeks. (J.L. Hellman).

EGYPTIAN ALFALFA WEEVIL (*Hypera brunneipennis*) - ARIZONA - District> County= larvae and adults per 100 sweeps of alfalfa: C> Maricopa= 5-150 and no data, Pinal= 20-106 and 21; and SW> Yuma= 30 and 1. (D. McCall et al.).

ARMY CUTWORM (*Euxoa auxiliaris*) - OKLAHOMA - District> County= counts per 0.09 sq m of seedling alfalfa: SW> Tillman= 1-2. (D.C. Arnold).

BLUE ALFALFA APHID (*Acyrthosiphon kondoi*) - ARIZONA - District> County= adults and immatures per 100 sweeps of alfalfa: C> Maricopa= 255. (D. McCall et al.).

PEA APHID (*Acyrthosiphon pisum*) - ARIZONA - District> County= adults and immatures on alfalfa: C> Maricopa= 80-1,200 per 100 sweeps, Pinal= 750-13,720 per 100 sweeps, and SW> Yuma= 50-100 per 10 sweeps. (D. McCall et al.). NEW MEXICO - District> County= status on alfalfa: SE> Eddy= increased in Artesia area, adults and nymphs 30+ per stem with considerable movement of winged adults in several fields. Beneficial insects controlled aphids in some fields but many fields had economic infestations that warranted controls. (L. Gholson). OKLAHOMA - First of season. District> County= counts on alfalfa: C> Grady= averaged 6 per 100 sweeps and SC> Stephens= none. (D.C. Arnold).

TARNISHED PLANT BUG (*Lygus lineolaris*) - OKLAHOMA - District> County= counts per 10 sweeps of alfalfa: NE> Wagoner= 1-10. (D.C. Arnold).

SUGAR BEETS

DISEASES

A CYST NEMATODE (*Heterodera amaranthi*) - KANSAS - New county record. District> County= in soil samples from sugar beet fields: NW> Sherman= collected at Goodland, October 10, 1978, by M.L. Shuman and T. Sim IV. Determined by A.M. Golden. (T. Sim IV).

GREEN PEACH APHID (*Myzus persicae*) - ARIZONA - District> County= immatures and adults per sugar beet leaf: C> Maricopa= 25-30. (P. Carras).

POTATOES, TOMATOES, PEPPERS

INSECTS

A CHRYSOMELID BEETLE (Plagiometriona clavata) - TEXAS - New county record. District> County= adult collected on potato in garden: SC> Bexar= at Terrell Hills, April 19, 1978, by L. Beikman. Determined by E.G. Riley. (J.A. Jackman).

COLE CROPS

INSECTS

DIAMONDBACK MOTH (Plutella xylostella) - FLORIDA - District> County= status on cabbage: C> St. Johns= infestations difficult to control in Hastings area. Damage and control costs this season estimated to be highest in many years. (F.W. Mead).

GENERAL VEGETABLES

INSECTS

CABBAGE LOOPER (Trichoplusia ni) - ARIZONA - District> County= eggs and larvae per 50 lettuce plants: SW> Yuma= 5-100 and 3-5 and C> Maricopa= 20-50 and 0. (C. Berens et al.).

CABBAGE MAGGOT (Hylemya brassicae) - NEW YORK - First of season. District> County= adults on vegetables: W> Ontario= collected March 21. (H.R. Willson).

GREEN PEACH APHID (Myzus persicae) - ARIZONA - District> County= counts on lettuce: SW> Yuma= nymphs 20 and adults 12 per plant and C> Maricopa= adults 1 per leaf. (C. Berens et al.).

DECIDUOUS FRUITS AND NUTS

INSECTS

EASTERN TENT CATERPILLAR (Malacosoma americanum) - OKLAHOMA - First of season. District> County= larvae on ornamental crabapple: C> Payne= newly hatched in Stillwater area. (D.C. Arnold). WEST VIRGINIA - First of season. District> County= larvae feeding on plum buds: SW> Kanawha= young larvae at St. Albans, March 21. (C.C. Coffman).

PLUM CURCULIO (Conotrachelus nenuphar) - SOUTH CAROLINA - District> County= counts per peach tree: NW> Anderson= adults 1-3 on 3 trees sampled at Simpson experiment station. (C.S. Gorsuch, G.T. Lee).

GREEN PEACH APHID (Myzus persicae) - IDAHO - District> County= status on peach trees: SW> Canyon= hatched. Nymphs in 2nd instar, 1 per 4-5 buds, at Parma. (G.W. Bishop).

SMALL FRUITS

INSECTS

A WHITEFLY (Aleuroplatus vaccinii) - FLORIDA - New State record. District> County= larvae infested leaves of 60% of 10,000 Vaccinium sp. (blueberry) plants in nursery: C> Alachua= collected at Earleton, October 6, 1978, by C.B. Lieberman. Determined by A.B. Hamon. Plants in nursery since 1972. (F.W. Mead).

MAN AND ANIMALS

INSECTS

HORN FLY (Haematobia irritans) - FLORIDA - District> County= averages per head in small beef herd: C> Alachua= 52 at Newberry, decreased from previous period because of cool temperatures and high winds. (D. Boyd).

HOUSEHOLDS AND STRUCTURES

INSECTS

EASTERN SUBTERRANEAN TERMITE (Reticulitermes flavipes) - MARYLAND - First swarms of season. District> County= swarms week ending March 23: NC> Baltimore and Montgomery and S> Prince Georges= occurred; peak swarming expected in about 3 weeks or more. (J.L. Hellman).

BENEFICIAL ORGANISMS & THEIR ENEMIES

INSECTS

AN ICHNEUMONID WASP (Bathyplectes curculionis) - OKLAHOMA - First of season. District> County= adults per 100 sweeps of alfalfa: SC> Stephens= 5-10. (D.C. Arnold).

FEDERAL AND STATE PROGRAMS

INSECTS

GRASSHOPPERS - OKLAHOMA - First of season. District> County= nymphal status: Panhandle> Cimarron= hatched March 18 in rangeland and EC> Pittsburg= hatched March 29 in pasture. Both near Lake Etling. (D.C. Arnold).

JAPANESE BEETLE (Popillia japonica) - KENTUCKY - District> County= larval averages (range) per 52 sq cm of turf week ending March 23: N> Boone= 2.1 (0-18) in 645 samples taken at Greater Cincinnati Airport. Most larvae in upper 5 cm of soil, also 20 cm deep. (L.M. Conn).

RED IMPORTED FIRE ANT (Solenopsis invicta) - FLORIDA - District> County= potential problem: C> St. Johns= moving into potato fields in Hastings area. Problems could arise as harvested potatoes are shipped unwashed--could affect handlers at receiving points and could be spread to other areas. (F.W. Mead).

SCREWWORM (Cochliomyia hominivorax) - No cases reported from continental United States March 4-10. Number of sterile flies released this period totaled 38,418,440 as follows: Texas 17,804,040; New Mexico 3,920,000; Arizona 16,589,400; California 105,000. Total of 182,703,360 sterile flies released within Barrier of Mexico February 25 to March 10. (J.E. Novy, M.E. Meadows).

WEST INDIAN SUGARCANE ROOT BORER (Diaprepes abbreviatus) - FLORIDA - District> County= adult counts on leaves of 5 of 10 Citrus sinensis plants in orchid nursery at Davie week of March 21: S> Broward= moderate. (R.P. Garry).

HAWAII PEST REPORT

General Vegetables - Infestations of LEAFMINER FLIES (Liriomyza spp.) trace to heavy on various crops in Kona area, Hawaii Island. Heavy on 0.4 ha of tomato under cover at Captain Cook. Moderate to heavy on 2 ha of cucumber at Napoopoo. Infestations and damage by a SLUG (Vaginulus plebeius) trace on 0.20 ha of pole beans at Captain Cook, Hawaii Island. (S. Matayoshi, L. Nakahara).

Ornamentals - New island record. Light infestation of a PSYLLID (Leptynoptera sulfurea) on 2 Calophyllum inophyllum (Indian laurel) trees at Keauhou (Kona), Hawaii Island. Collected on March 22, 1979, by S. Matayoshi and L. Nakahara. Determined by S. Higa. Heavy infestations of KIRKALDY WHITEFLY (Dialeurodes kirkaldyi) on backyard plumeria and gardenia at Keauhou (Kona), Hawaii Island. (L. Nakahara).

DETECTION

NEW STATE RECORDS

DISEASES

A CYST NEMATODE (Heterodera amaranthi) - KANSAS - District> County= cysts taken from 2 soil samples: EC> Franklin= Amaranthus retroflexus (rough pigweed) prevalent in many soybean fields in area and may have been principal host. Collected near Pomona and Ottawa, November 7, 1978, by T. Sim IV. Determined by A.M. Golden. (T. Sim IV).

INSECTS

A WHITEFLY (Aleuroplatus vaccinii) - FLORIDA - Alachua County. (p. 113).

NEW COUNTY AND ISLAND RECORDS

DISEASES

A CYST NEMATODE (Heterodera amaranthi) - KANSAS - Sherman. (p. 112).

INSECTS

A BRUCHID BEETLE (Mimosestes nubigens) - TEXAS - District> County= adult on oats: SC> Bexar= collected at Buena Vista, April 26, 1978, by L. Beikman. Determined by B.J. Abraham. (J.A. Jackman).

A CHRYSOMELID BEETLE (Altica foliacea) - TEXAS - District> County= adult on wheat: SC> Guadalupe= no data for city, collected May 10, 1978, by L. Beikman. Determined by E.G. Riley. (J.A. Jackman).

A CHRYSOMELID BEETLE (Chelymorpha geniculata) - TEXAS - District> County= adult on corn in garden: SC> Karnes= collected at Karnes City, May 16, 1978, by L. Beikman. Determined by E.G. Riley. (J.A. Jackman).

A CHRYSOMELID BEETLE (Griburius lecontei) - TEXAS - District> County= SC> Bexar= collected at Buena Vista, April 26, 1978, by L. Beikman. Determined by R. White. (J.A. Jackman).

A CHRYSOMELID BEETLE (Plagiometriona clavata) - TEXAS - Bexar. (p. 113).

A CURCULIONID BEETLE (Colecerus marmoratus) - TEXAS - District> County= 2 adults in wheat fields: SC> Comal= collected near New Braunfels, May 8, 1978, and Guadalupe= specimen collected (no data for city), May 10, 1978. Both collected by L. Beikman and determined by D.R. Whitehead. (J.A. Jackman).

A PSYLLID (Leptynoptera sulfurea) - HAWAII - Hawaii Island. (p. 115).

SOUTHERN CORN ROOTWORM (Diabrotica undecimpunctata howardi) - TEXAS - Medina. (p. 111).

THREELINED POTATO BEETLE (Lema trilineata) - TEXAS - Bexar. (p. 111).

WEEDS

DALMATIAN TOADFLAX (Linaria dalmatica) - CALIFORNIA - District> County= specimen in garden at residence: Sierra Mountains> Mono= collected at Coleville, March 1, 1979, by M. Keffer, G. Milovich, and F. Sutter. Determined by T.C. Fuller. (B. Haas).

LIGHT TRAP COLLECTIONS

Pest Interceptions of Quarantine Significance at Ports of Entry

Plant Importation and Technical Support Staff
Plant Protection and Quarantine Programs, USDA

<u>Life Stage</u>	<u>Host</u>	<u>Probable Origin</u>	<u>Port of Entry</u>	<u>Desti-nation</u>
<u><i>Abgrallaspis</i> sp.</u> <u>a diaspidid scale</u> Det. S. Nakahara	adult on stems of <u>Anthurium</u> plants <u>From cargo</u>	Colombia	Miami	FL
<u><i>Aspidiotus elaeidis</i> Marchal</u> <u>a diaspidid scale</u> Det. S. Nakahara	adult on leaves of <u>Ficus</u> plants from cargo	Ivory Coast	Miami	FL
<u><i>Camponotus vagus</i> (Scopoli)</u> <u>an ant</u> Det. D.R. Smith	adult in wood crates of household effects	West Germany	McGuire AFB	NJ
<u><i>Curculio</i> sp.</u> <u>a weevil</u> Det. D.M. Anderson	larval in seeds of <u>Quercus</u> from baggage	Algeria	Chicago	MI
<u><i>Hypocryphalus</i> sp.</u> <u>a scolytid beetle</u> Det. D.M. Anderson	adult in wood pallets of steel nuts	India	Savannah	--
<u><i>Mecistocerus</i> sp.</u> <u>a weevil</u> Det. D.R. Whitehead	larval adult in wood crates of iron castings	India	New York	NJ
<u><i>Niphades</i> sp.</u> <u>a weevil</u> Det. D.M. Anderson	larval in damage	Japan	San Francisco	CA
<u><i>Rhizoecus</i> sp.</u> <u>a mealybug</u> Det. S. Nakahara	adult nymphs on roots of <u>Lithops</u> plants from mail	Switzerland	Hoboken	NJ

SUMMARY OF PEST CONDITIONS IN THE UNITED STATES - 1978

INTRODUCTION

The summary of pest conditions, beginning in this issue, will be continued for several issues of the "Cooperative Plant Pest Report." This summary was compiled by the New Pest Detection and Survey Staff from annual summaries submitted by various State and Federal cooperators. A list of individuals who assisted in assembling data will appear near the end of the last section of this summary. The New Pest Detection and Survey Staff appreciates the assistance of all individuals who have participated in the preparation of material for the 1978 summary.

CORN, SORGHUM, SUGARCANE

Highlights

COMMON MAIZE RUST on corn in Kansas and Iowa was not as prevalent in 1978 as in 1977. SUGARCANE SMUT and SUGARCANE APHID were reported for the first time in the continental United States in Florida. STALK ROTTS were the most damaging diseases of corn and sorghum in Kansas. EUROPEAN CORN BORER increased on corn in North Dakota, potential is heavy in Wisconsin, caused \$14+ million loss to grain corn in Minnesota, and populations increased in Illinois, Kentucky, Indiana, and Delaware. A partial fourth brood was indicated in Virginia. DINGY CUTWORM was serious on over a million hectares of corn in Iowa. BLACK CUTWORM was severe on over half a million hectares in Iowa, worst in years in Illinois, caused control problems in parts of Kentucky, reduced stands in Mississippi and North Carolina, and was the heaviest in years in Maryland. CHINCH BUG increased in parts of Indiana and Nebraska.

DISEASES

COMMON MAIZE RUST (*Puccinia sorghi*) in KANSAS was not as prevalent on corn in 1978 as in 1977, most likely due to dry summer conditions. Infections were most prevalent in the southwest, south-central, north-central, northeast, and east-central districts. Prevalence was seldom greater than 25%. The estimated loss was 0.2%.

Common maize rust infections in IOWA appeared late and did not become widespread until September. Prevalence was significantly below the previous season for mid-July. Severity averaged 10% by harvest, slightly below the 1977 level; 99 out of every 100 corn plants [silk emerging to blister] had the upper leaves infected. Severities above 20% in scattered fields were not noted until late season. The weather was the dominant factor for the differences between 1977 and 1978. Dry weather during the first half of 1977 placed the corn crop under stress. A wet, warm 1978 minimized moisture stress.

Common maize rust in OHIO was one of the most prevalent diseases of corn in the State. Infections were found in almost every field surveyed but occurred late in the season and caused no yield loss. This disease was present in only trace amounts in most fields with a maximum severity of 5-10% leaf surface affected. Although the disease prevalence was close to 100%, often only a few pustules could be found on a single plant.

SOUTHERN RUST (*Puccinia polysora*) in MISSOURI was detected only in the corn monitoring plot at Mt. Vernon, Lawrence County. Only a few scattered pustules were observed. Although it was not economically significant, this disease should be closely observed because of its potential as an epiphytotic.

SUGARCANE SMUT (*Ustilago scitaminea*) was first detected in sugarcane 7.2 km (4.5 miles) southeast of Clewiston, Palm Beach County, FLORIDA, June 28, 1978. This was the first record of this disease in the continental United States. Subsequent surveys revealed it in parts of Martin, Hendry, and Glades Counties. Much of the sugarcane grown in Florida is resistant to sugarcane smut. Future control efforts in the State will be concentrated on resistant varieties.

COMMON SMUT (*Ustilago maydis*) was the most widespread corn disease in KANSAS. Infections were reported from all except the west-central and southeast districts. Prevalence varied from trace in many fields in the eastern area up to 70% in some fields in the northwest district. The estimated loss was 0.5%. Infections in OHIO were found in virtually every corn field surveyed. In most cases, prevalence was very light (trace to 3%) but unusually heavy (10-20%) in occasional fields with stalk infections occurring below the ears. The ears on infected stalks were often reduced in size relative to healthy plants. Dry weather in the beginning of the growing season may have contributed to these unusual situations.

HEAD SMUT (*Sphacelotheca reiliana*) in KANSAS was observed on sorghum only in parts of the southwestern area; prevalence was generally less than 1%.

The causal pathogen of ANTHRACNOSE LEAF BLIGHT (*Colletotrichum graminicola*) in IOWA was isolated from lesions found on the lower to middle leaves of corn plants in 2 commercial fields in Muscatine and Clinton Counties, June 14, for new State and county records, respectively. High precipitation levels for this period parallels the observed occurrence and indicates a close relationship between moisture and symptoms. The prevalence and severity of these symptoms strongly correlate with the topography of each field--low areas showing high prevalence/severity levels.

Anthracnose leaf blight infections in OHIO occurred in most of the fields surveyed. Symptoms were seen first in early season on the lower leaves of seedling corn and later in the season on the upper leaves of mature plants. Heavily infected top leaves often had a blighted appearance. Prevalence often approached 100% in late season and severities ranged 10-60%. Infections in MICHIGAN were more prevalent on corn in 1978 than in 1977. Higher temperatures and humidity in August might have increased severity in the southern counties. Although considered a minor disease in the past, severe outbreaks on corn have recently been documented from several southern States. 1/ 2/

1/ Morgan, D.D., and J.G. Kantzes. 1971. Observations of *Colletotrichum graminicola* on T corn and blends in Maryland. *Plant Dis. Rep.* 55:755.

2/ Warren, H.L., R.L. Nicholson, A.J. Ullstrup, and E.G. Sharville. 1973. Observations of *Colletotrichum graminicola* on sweet corn in Indiana. *Plant Dis. Rep.* 57:143-144.

Stalk rots were the most damaging corn diseases in KANSAS, but less lodging from stalk rots was observed in 1978 than in 1977. CHARCOAL ROT (Macrophomina phaseolina) was the most damaging with an estimated loss of 6%. This disease was reported from every district and was most severe in the east-central district. GIBBERELLA STALK ROT (Gibberella (Fusarium) roseum f.sp. cerealis) occurred statewide on corn. Infections were most severe in the south-central and north-central districts of Kansas. The estimated loss was 5%. DIPLODIA STALK ROT (Diplodia maydis) on corn in Kansas occurred in widely scattered fields in the south-central, central, north-central, northeast, and east-central districts. The estimated loss was 0.2%.

Stalk rots were also the most damaging sorghum disease in Kansas. The 2 stalk rots observed in sorghum were a STALK ROT (Fusarium sp.) and CHARCOAL ROT. The Fusarium stalk rot was observed over most of the eastern two-thirds of the State with the central district being most affected with prevalences up to 90% in some fields. Charcoal rot was observed only in the south-central district in a few scattered fields. However, prevalences of 100% were observed. The estimated loss from these 2 diseases was 3%.

Charcoal rot was the predominant stalk rot in MISSOURI and was prevalent throughout the corn-growing regions. However, because of the ideal harvesting conditions, corn was harvested before any significant lodging occurred.

CORN EYESPOT (Kabatiella zeae) symptoms on corn plants in MICHIGAN were observed early in the growing season in the southern counties. The early occurrence of the disease may have been due to the cooler temperatures in May and June. Prevalence was up to 80% in some counties. This disease did not cause any serious economic loss.

The incidence of SOOTY STRIPE (Ramulispora sorghi) in KANSAS was quite variable on sorghum from field to field. Infections ranged from trace to 60% in the south-central, east-central, and northeast districts.

SORGHUM DOWNY MILDEW (Sclerospora sorghi) was taken in sorghum fields in 6 counties in KANSAS for new county records. See CPPR 4(8):79. Both local and systemic infections were noted.

GOSS'S WILT (Corynebacterium nebraskense) in KANSAS was reported on corn only from Cheyenne and Sherman Counties in the northwestern area. An apparently lighter prevalence than observed in 1977, 1976, and 1975 may be attributed to use of tolerant hybrids. The estimated loss was less than 0.1%. Infections were observed on corn in Ida County, IOWA, for a new county record. See CPPR 3(48-52):672.

STEWART'S WILT (Erwinia stewartii) on corn in MISSOURI was observed at the lowest level in 10 years due to the heavy winter kill of the vector, CORN FLEA BEETLE (Chaetocnema pulicaria).

MAIZE DWARF MOSAIC VIRUS was observed on sorghum in all districts of KANSAS, except the northwest and west-central. It was most obvious in the southeast district with up to 60% prevalence being observed. Prevalences in other districts were seldom above 5%. The estimated loss was 1%. Prevalence on corn statewide was reduced from the levels observed in 1977. This disease was reported from widely scattered fields in the northwest, north-central, northeast, and central districts and severities were quite low in those areas except where CORN LETHAL NECROSIS disease was involved. The estimated loss is 0.5%.

CORN LETHAL NECROSIS in KANSAS was prevalent in the Norton and Kirwin irrigation districts in Norton, Phillips, and Smith Counties in the northwestern and north-central areas. This disease was also observed in Osborne and Republic Counties in the north-central area. Prevalences up to 80% were observed in individual fields. The statewide loss from this disease was estimated to be 0.1%.

ROOTLESS CORN (cause unknown) is characterized by lack of secondary root development which may result in young plants tipping over or leaning. Insects such as ROOTWORMS were ruled out as probable causes. The disease was first detected in early June in MISSOURI and was most prevalent in the west-central and northwestern areas. As much as 5% of the corn showed symptoms in the affected areas of the State.

INSECTS

Winter survival of EUROPEAN CORN BORER (*Ostrinia nubilalis*) larvae in NEBRASKA averaged 60% in 25 sites surveyed in Pierce, Knox, Antelope, Cedar, and Dixon Counties, May 18. Surviving larvae averaged 2.58 per 0.8 sq m (sq yd) and less than 5% had pupated as of that date. The overall survival rate was 25% in Saunders, Dodge, Colfax, and Butler Counties. An average of 25.5% of the surviving larvae had pupated as of May 23. The primary mortality factor in these counties appeared to be caused by *Beauvaria bassiana* (a corn borer fungus). The first adults of the season were reported in Hamilton County, May 27 and in Dixon County, June 3.

European corn borer adults were active throughout the eastern third of Nebraska by June 7. Corn planting was delayed in the southern part of this area by wet weather conditions. First generation larval survival was probably reduced due to the small plants. Adult activity peaked about June 15 and had virtually ended by July 6 in the eastern area. Severe first generation larval infestations were scattered in the southeast, east, south, and central districts. The majority of the irrigated corn fields in Cedar, Dixon, Wayne, Pierce, Madison, and Antelope Counties had 35%+ of the plants infested with egg masses and/or larvae by July 6. About 40,000 ha (100,000 acres) were treated for the first generation in the northeast district. First generation larvae were first noted July 10 in sweet corn in Lancaster County.

European corn borer adults appeared in light trap catches throughout the eastern area of Nebraska by July 25. Surveys in the northeast district, July 25-27, showed that first generation larval pupation was 25% or less. Adult activity remained light in the southeastern and south-central areas through August 9. However, adults averaged 1,000+ per night August 1-9 in a Holt County blacklight trap in the northeast district. Adult activity increased slightly in the southern area of the State August 10-17, but decreased Statewide after that period.

The first 2 weeks of August in Nebraska were characterized by abnormally cool weather. The cool nights undoubtedly caused a decrease in the number of second generation European corn borer eggs laid during this period. More than 50% of the egg masses in the northeast district had hatched by August 17. Scattered fields with 100% of the plants infested with egg masses and/or larvae were reported in the northeast and central districts August 9-17. The majority of the fields in these districts had no larvae or had non-economic infestations. Infestations in the southeast, south, and east districts had eggs and/or larvae on 20% or less of the plants.

Fall surveys in Nebraska showed decreases in second generation European corn borer populations from the previous year of about 30% in the northeast and east districts and 60% in the central, south, and southeast districts. Averages of live borers per plant by district were as follows: Northeast--2.3, east--2.4, southeast--1.7, central--1.2, and south--1.0. Only trace numbers of borers infected with Beauvaria bassiana were observed.

European corn borer winter survival in NORTH DAKOTA averaged 82% in untilled corn fields in Cass, Dickey, Ransom, Richland, and Sargent Counties. The fall infestation survey showed an increase in the same counties from 98 borers per 100 plants in 1977 to 288 borers per 100 plants in 1978. The percent of plants infested also increased from 62% in 1977 to 99% in 1978.

European corn borer infestations on corn in IOWA were moderate to heavy. Adults were first taken May 29 in Henry County and May 31 in Hancock County. Peak flight activity occurred June 10-25. Spotty but intense infestations were reported from Fremont, Taylor, and Wapello Counties by July 3; damaged fields ranged 50-100% infested. First generation damage was heaviest south of National Interstate Highway 80. Moderate to heavy infestations extended north of National Interstate Highway 80 in the west-central area and in the central area to the northern border. Many larvae were at least 1 cm (0.5 in) long at this time with some pupae present.

European corn borer adult activity peaked around August 10-15 in Iowa. However, the development of the second generation population was slower than expected. The adult flight was heavy statewide but egg laying was sporadic in the central and northern area. Egg masses ranged from 1 to 7 per 10 plants in Webster County to 1 or more per plant in some Story and Warren County fields, August 18. Third instar larvae were reported during the third week of August in Guthrie County and 1-5 larvae per plant were seen in several fields in Johnson County, August 16. European corn borer adult flight was significant during the last 3 weeks of August. Therefore, it was not possible to time treatments so that a single application resulted in good control. Infestations averaged 244 per 100 plants in 96% of the plants during the season. Moderate infestations, which may be locally intense, can be expected in western, northern, southeastern, and central area corn fields in 1979.

European corn borer overwintering survival in WISCONSIN was high. By May 22, pupation was 40% complete in Kenosha County and 56% complete by May 24 in Columbia County. Adult emergence started by late May but most field corn was not suitable for egg laying or larval development. Adults emerging later found excellent egg laying conditions, resulting in a high larval survival and infestation rate. In mid-July, the first generation population was 3-5 times greater than in recent years. The second adult flight, which started in late July in the southern area, was the heaviest ever recorded and persisted until mid-September. Sweet corn, snap beans, and green peppers were heavily infested frequently despite chemical treatments. Larvae, 4th and 5th instar, averaged 88 per 100 plants during the annual fall survey, the 4th heaviest population in 37 years. The heavy population going into the winter of 1978-1979 serves as the base for potentially heavy populations in the 1979 growing season.

European corn borer surveys taken in MINNESOTA in the fall of 1977 indicated record high populations in all districts. The overwintering larval survival determined in the spring of 1978 was 22%, much less than the 59% in 1977. Parasitism averaged 3% in the west-central, southwest, south-central, and southeast districts. A larval parasite, Eriborus terebrans (an ichneumonid wasp), was recovered from corn field collections. As indicated from light

traps, European corn borer adult emergence, began during the last week in May and continued until mid-July. Le Sueur and Lamberton stations recorded peak numbers of European corn borer adults in the third week of June while adults peaked a week later in Worthington station. These heavy numbers, however, did not result in a larger first generation in 1978. Light infestations ranged 3-6% in the west-central, southwest, south-central, and southeast districts by June 30.

By mid-July, there was an increase in European corn borer infestation levels in Minnesota but well below the 50% to warrant treatment because the corn plants were too young and unsuitable for feeding. By August 1, first generation adults began to emerge reaching a peak emergence by the end of August. Egg mass surveys for the second generation yielded only trace numbers in all 3 southern districts. The fall 1978 larval surveys were conducted in 33 counties and 165 corn fields. All districts except the west-central showed lighter populations than in 1977. Percent plants infested and the number of borers per 100 corn plants in 1978 (and 1977) by district: West-central--67% and 180 (81% and 229), south-central--60% and 69 (93% and 322), and southeast--39% and 36 (80% and 137). Statewide averages were 60% and 104 (75% and 163).

Based on European corn borer density in Minnesota, heavy populations are likely in the west-central and southwest districts in 1979. This is dependent on weather factors because high densities are not necessarily repeated in the same area. Damage to corn shanks was 32% and corn ear dropage 1.1% statewide as compared to 20.1% and 2.9%, respectively, in 1977. Based on the December 1978 price of \$2.09 per bushel and total Minnesota production of 628.3 million bushels of corn for grain, the estimated loss from ear dropage was over \$14 million. Treatments were applied to about 26,000 ha (64,000 acres) of field corn in 1978. The control cost for field corn based on an average of \$17.50 per hectare (2 acres) amounted to over \$455,000.

European corn borer overwintering survival surveys in ILLINOIS conducted in early spring showed survival to be about 75% statewide, ranging from 50% to 100%. Pupation of the overwintering generation began in the southern area about the first week of May and in the northern area about the third week of May. Adult flights and egg laying started in the southern area about the third week of May, and in the northern area about the second week of June. The early infestations on field corn were, as expected, on the earliest planted corn. Infestations were often 70+, even though egg laying was not yet complete. By the second week of July, pupation and emergence were again noted from the southern area. Second generation egg laying was observed in the southern areas by the third week of July and in the northern area by the second week of August. During the first week of September, pupation in McDonough County and egg masses on corn in Champaign County suggested either very late second generation activity, or third generation borer activity. The southern area typically experiences the third generation, but this is considered unusual for the more northern areas.

Many corn fields in Illinois were destroyed by European corn borer infestations in 1978. The State average number of borers per 100 plants in the first generation was 23.8, a tenfold increase over 1977. The State average number of borers per 100 plants in the second generation was 281, almost twice the number recorded in 1977 (155), and the heaviest population since 1955. The unusually heavy first generation populations for 1978 resulted in about 0.45 million ha (1.1 million acres) being treated as opposed to 32,375 ha (80,000 acres) treated in 1977.

The first European corn borer adult activity of the season in KENTUCKY occurred May 10 and peak flight activity occurred during the first week of June according to Fayette County blacklight trap. The first larvae of the season were observed on corn in Todd County, May 31. By the first week of June, larval damage was becoming noticeable in southern area corn fields. Larval damage continued to increase and reached extremely high levels by mid-June. At that time larval infestations were at or above economic threshold levels in nearly half the corn fields in the State. During this period, 5-10% of the corn acreage was treated.

New adults in Kentucky began to emerge by mid-July and the flight peaked about the first week of August. Damage from second generation larvae did not reach the expected levels. This is thought to be related to an abnormally long flight period, the large amount of corn acreage still suitable for egg laying, and scattered heavy rains that occurred during the egg laying period. Damage from the second and eventual third generation larvae led to an additional 2-3% of the corn acreage being treated. The fall infestation survey revealed an average of 75% of the corn plants to be infested and an average of 125-150 borers per 100 plants, with the heaviest population levels occurring in the Purchase and the southern part of the mid-western region. These levels were slightly higher than in 1977 and about double the average of prior years.

European corn borer larvae in INDIANA averaged about 68 per 100 cornstalks in the fall of 1977, a relatively heavy population for the State. The survival rate was probably high because of the good snow cover. Pupation was virtually complete by May 22 in the southern district, and the first adult collected in blacklight traps was taken May 24 in Knox County. In Tippecanoe County, there were heavy flights June 1-7, August 10-16, and September 7-13. Spring generation European corn borer adults were found only in a few fields because of the late planting, and these fields were sometimes heavily damaged, mostly by early instars, by June 15 in the southern district. Egg masses at the rate of 1 per plant were often present. The late planting in Indiana made large acreages available for the summer brood, resulting in the heaviest overwintering population in Indiana survey history, 199.6 per 100 stalks. The northern half was most heavily infested, all surveyed districts reached all-time peaks, and 2 contiguous counties, Pulaski and Marshall, averaged 6+ larvae per stalk. Larvae were collected from jimson weed and velvet leaf and destroyed about 5% of an oat field in Randolph County.

European corn borer adults in OHIO were first reported emerging May 5, and egg masses deposited by these adults began hatching during the fourth week of June. Heavy larval populations were reported from some corn fields, but first generation damage was not found to be severe. Populations averaged 38% infested plants in affected fields. More problems with larvae infesting the ears of sweet corn late in August and September were reported. Widely scattered and light (3-5% of the corn plants infested) larval infestations annually occur throughout NORTH CAROLINA during June. Infestations during June 1978 exceeded 60% of the plants infested in 10 of 100 fields sampled in Johnston, Wilson, Edgecombe, and Wake Counties. Other field reports indicated that similar conditions existed statewide. Numerous fields averaged 3 borers per plant. Borer damage during the growing stages of corn rarely limited yield in the State.

European corn borer damage throughout VIRGINIA was heavy and widespread by July 7. Damage was heaviest in early planted corn. More European corn borers developed in Irish potatoes and corn than was expected. Problems were observed in spring snap beans, especially from the Norfolk area. In mid-July, populations

of European corn borer continued to be heavy statewide, coinciding with the national trend. A survey in the Norfolk area confirmed that larvae were uniformly distributed over a wide area. Adult collections increased from 15-25 per night to 50 or more in Accomack County by September 1. This was totally unexpected but indicated a potential late season infestation of borers. Adult collections unexpectedly continued to average 50-75 per night as of September 5. There were strong indications in 1975 and 1977 that at least a partial fourth brood of borers was occurring. It is entirely possible that this late adult flight is the forerunner of a basic change in corn borer development.

Overwintered European corn borer populations in MARYLAND were delayed 3 weeks because of cool spring weather; pupation was only 35% by April 28. First brood corn borer damage to corn was 30% over the normal, the synchronized late emergence of the overwintered generation coincided with the maximum stage of egg laying attractiveness in the corn plants on the Eastern Shore. Treatment was applied to 40,468.7 ha (100,000 acres) of the Eastern Shore field corn. Much of it was too late for effective control and the yield loss averaged about 15%. Second generation corn borer was at normal levels. As with field corn, sweet corn was heavily infested. Statewide, 5,058.6 ha (12,500 acres) of sweet corn for processing were treated an average of 1.5 times per acre compared with 1.1 per acre in 1977 and 0.6 per acre in 1976; with 1,214 ha (3,000 acres) actually treated before silking. Fresh market corn averaged 3-4 treatments in 1,619 ha (4,000 acres) statewide.

Spring pupation of overwintering European corn borer larvae in DELAWARE was considerably delayed compared to previous years. It was not until May 6-12 that about 50% of these borers had pupated and the first adults of the season were collected in blacklight traps. The first egg masses of the season were found on dock weeds during the week of May 20 when adults averaged 9 per night in trap collections. Fresh egg masses were present on corn starting the week of May 27, adults averaged 24 per night in trap collections at this time. By late June, adults were very light in trap collections. Pupae from the first brood were common in many fields during the week of July 15 when the second seasonal adult flights started in most areas.

By the week of July 22, fresh European corn borer egg masses were present on corn and other crops throughout Delaware. The following week, egg masses averaged 23 per 100 corn plants in Sussex County with rather heavy adult flights. Through most of August in Sussex County, adult counts were light but by late August and early September, trap collections were averaging 150+ per night in most areas of the State. Counts continued to be heavy, 45 per night, for several weeks. The fall abundance survey in field corn showed a State average of 569 borers per 100 plants. This is the second heaviest fall population ever recorded for the State.

The first European corn borer adult collection of the season in NEW YORK was taken in a blacklight trap on Long Island, May 28 and the week ending June 2 in the Upstate stations. The first of season report of egg masses was in Columbia County the week ending June 2. The first of season egg hatch was found June 9 in Niagara County. Inspection of 8 sites in Monroe County found an average of 16% infested plants in late July. Reports were received of heavy borer activity in the western area the week ending July 29 where early planted field corn was experiencing 100% levels of infestation. Very heavy blacklight trap catches were taken in Yates County where sweet corn had above normal levels of infestation.

Some treatments for SOUTHWESTERN CORN BORER (Diatraea grandiosella) in ARIZONA were applied on corn in Cochise County. Controls were successful. Yields were well above the 1977 level. Populations of this species, FALL ARMYWORM (Spodoptera frugiperda), and CORN EARWORM (Heliothis zea) in NEW MEXICO were very heavy in corn fields in the eastern counties during the summer months. First generation D. grandiosella larvae caused extensive damage to corn in Curry, Roosevelt, Quay, and Colfax Counties. Unusually heavy S. frugiperda populations appeared in September and October statewide. Growers were forced to control these pests throughout the summer.

Southwestern corn borer populations in TEXAS were heavy on corn in the South Plains and Panhandle area. First generation larvae in OKLAHOMA were found in corn in several areas by the end of June. Infestations were generally light except for a few areas in Texas County and 1 report from Ellis County. Pupation was about 50% complete and adult emergence was underway in the Panhandle counties by the end of July. Second generation egg laying occurred during the first half of August.

SUGARCANE BORER (Diatraea saccharalis) population levels in FLORIDA were about normal in the Everglades region, but increased monitoring activities resulted in more chemical controls being used. Experimental plots in Palm Beach County involving Solenopsis invicta (red imported fire ant) as a predator revealed that this ant preyed upon eggs, larvae, and pupae of D. saccharalis resulting in significant population reduction of this borer.

Light trap reports from NEBRASKA indicated that appreciable ARMYWORM (Pseudaletia unipuncta) adult activity began the last week in May in the southeastern quarter of the State and reached a peak from June 20-26 when 1,419 adults were taken in a blacklight trap in Hamilton County. Adult activity tapered off from that point, but some adults continued to be trapped through the end of August. Moderate larval infestations in turf grass were reported from Colfax County on July 11. The first report of larval infestations in corn came from Hall County on July 12 where fields that had been damaged by hail 1-2 weeks previously were infested with up to 1.5 larvae (2nd to 3rd instar) per plant on 50% of the plants.

From July 27 to August 9, armyworm larval infestations in corn fields in Nebraska were reported from Antelope and Holt Counties (up to 10 per plant in some areas of some fields), Hamilton, Kearney, Saunders, and Fillmore Counties (trace populations), and Thayer County (up to 9 per 0.8 sq m (sq yd) in grassy areas). In all of these cases the larvae were concentrated in areas with grassy weeds and/or volunteer corn. Most of the feeding activity was restricted to the weeds and no significant damage to the corn occurred. Scattered corn fields in Dawson and Lincoln Counties had infestations ranging up to 30% of the ears with an average of 1 larva, and an average of 1 larva per 0.8 sq m on the ground August 8-17. Larval feeding in these fields was restricted predominately to grassy weeds and the silks of pollinated ears with little reduction in yield. Significant infestations were reported from Buffalo County where larvae ranged up to 5 per plant and 7 per 0.09 sq m (sq ft) on the ground in 7 corn fields on August 3. Half to full-grown larvae averaged 5 per 0.09 sq m (sq ft) in an oat field in the northwest district on August 3. No significant damage was reported.

Damaging armyworm populations in WISCONSIN appeared in field and sweet corn in scattered areas. Several hundred acres, primarily in the west-central and north-central counties, were treated with insecticides. The heaviest

population of armyworm observed was in Taylor County where larvae averaged 2 per plant throughout the field. Generally, the heavily infested fields also had heavy infestations of Agropyron repens (quackgrass). The first armyworm adult collected in a blacklight trap was taken April 8 in Lawrence County. Flights peaked in Tippecanoe County May 18-24, July 6-12, and August 24-30. No problems were observed except in the counties along the northern border, where corn fields were occasionally infested.

Armyworm infestations in MARYLAND were at the lightest level in the past 5 years. There were no economic losses reported on corn statewide and no controls applied. The first adults of the season in DELAWARE were present in blacklight traps during the week of April 22. Infestations in most corn was rather light in most areas. The first of season blacklight trap catch in NEW YORK was April 14 on Long Island and the week ending May 12 in the Finger Lakes area. Heavy infestations in 2 corn fields in Genesee County were reported July 25. The second generation caused problems in the western and northern areas.

FALL ARMYWORM (Spodoptera frugiperda) populations in MISSISSIPPI were much lighter during 1978 compared to the record setting damage in 1977. Larvae feeding on corn were first reported on May 29 in Newton and Oktibbeha Counties. Damage by this first generation was insignificant. The first economic infestation on corn was reported on July 20 in Pontotoc County. Populations continued to increase in isolated areas of the State until a decrease was observed in late-August. Fall armyworm larvae in TENNESSEE were collected from sweet corn 1 month earlier than usual, but no significant damage was reported. This pest has caused severe damage in the past. The first report of larval damage in KENTUCKY was received from a late-planted corn field in Todd County on June 29. During 1977, larvae caused economic damage in only an occasional late-planted field and damage was generally spotty within fields. Less than 1% of the corn acreage required treatment in 1978.

Fall armyworm in FLORIDA was the most common budworm found on corn in Dade County. The population appeared to be somewhat heavier than usual in November and December. Infestations damaged 5% of the ears in 1 sweet corn field. Populations in the Bradenton area, Manatee County, were light in the spring but increased greatly in the fall. Untreated seedling corn [30 cm (12 in) or less in height] averaged up to 6.9 larvae per plant. Two treatments were needed to check the populations. Up to 100% of the ears were damaged. Very few Heliothis zea (corn earworm) larvae were present, apparently due to the cannibalistic behavior of fall armyworm. Infestations were not as heavy as in 1977 in the northern Florida area but damaging levels occurred on several hundred acres of corn in the Alachua County area during late July through August. Populations were heavy (100% infestation) on untreated field corn and sorghum in the Hastings area, St. Johns County, during spring and summer, and it was a limiting factor in the production of these crops.

Fall armyworm infestations on corn and sorghum in SOUTH CAROLINA were much lighter than in 1977. Larval infestations in corn in NORTH CAROLINA were generally more severe than in 1976 but less severe than the record infestations of 1977. Again, the cold, wet spring significantly contributed to a higher than average percentage of late-planted corn fields. Infestations in late-planted field corn began appearing in Brunswick County during late June and early July. Field sampling July 11-13 in 14 Coastal Plain and Piedmont counties revealed infestations in 25 of 50 pretassel corn fields sampled. The average infestation was 8% of the plants infested with the heaviest infestation being 25% of the plants infested in a Davidson County field. Damage gradually increased until August 11-15 when surveys in 30 late-maturing corn fields revealed that 75%

of the presilking corn fields (mainly in the Piedmont area) was infested. Fall armyworm infestations averaged 25% of the plants damaged in such fields compared to 85% during the same period in 1977. Losses due to fall armyworm in 1978 primarily resulted from extensive ear feeding statewide.

The appearance of fall armyworm in VIRGINIA on corn was somewhat earlier than usual since this insect does not overwinter where the ground freezes. Two larvae were collected on corn at Blacksburg, Montgomery County, July 19, indicating adults had probably moved into the area within the previous 2 weeks. At Painter, fall armyworm was observed in the field by June 15, and by July 31 about 80% of the sweet corn plants at Painter were infested. On August 4, 80-85% of late-planted corn [waist-high] in Nottoway County was reported infested with larvae. Damage usually starts in this area and is most severe on late-planted corn.

By August 11, fall armyworm adult collections in Accomack County, Virginia, were increasing and had caused extensive damage to sweet corn in station plantings. Reports continued to filter in from Accomack County through August 18. Damage was showing up on late-planted corn. There were indications that damage in 1978 may be just as severe as in 1977 on the Eastern Shore. Heavy damage already had been noted in late-planted sweet corn, snap beans, and field corn in Accomack and Northampton Counties. Adult flights continued to be heavy through September 8, 1978.

Some heavy fall armyworm infestations occurred in late-planted corn during mid-to late August in Sussex County, DELAWARE. The first of season blacklight trap catch in NEW YORK was taken the week ending July 21 on Long Island. Pheromone-baited traps collected adults earlier than most blacklight trap stations. The first Upstate blacklight trap catch was taken in Yates and Ontario Counties, the week ending July 27. The first larvae were detected July 25 in Ulster County sweet corn, where 15% larval infestation levels were reported the week ending August 11. In general, population levels were below 1977, but above normal. Populations caused severe damage to sweet corn ears in southern NEW HAMPSHIRE, from August 1 to the end of the season. An average of 21% of all ears examined was damaged during the late summer. The maximum damage level was 50% of all ears examined in some fields at Dover, Strafford County, and at Stratham, Rockingham County. Damage was much more severe and widespread in 1978 than in 1977.

CORN EARWORM (Heliothis zea) populations in IDAHO were slightly heavier than normal. Infestations in the Parma area reached 228 per 100 ears on late-planted corn. Averages ranged 150-200 per 100 ears in late-planted corn during normal years. Spray programs were much less extensive in 1978 because the cannery corn acreage was planted in areas not infested by larvae. Weather conditions were slightly out of synchronization with the life cycle due to cooler temperatures; 130-150 earworms per 100 ears are expected on late-planted corn in the southwestern area in 1979. Populations reached 70-80 per 100 ears at Moscow, Latah County. Fewer than 5 per 100 ears are noted in a normal year. Small larvae were noted at harvest in many fields of late-planted processing corn in the Twin Falls area.

Corn earworm adults were active in OKLAHOMA by late April but larvae were not reported until the end of May. Infestations were generally heavy, as usual, in corn in all areas except the Panhandle during June and July and in late corn in some areas through August. Infestations were reported in sorghum from early July to early October but populations were light in almost all cases. Larvae in

ARKANSAS reached 1 per head in some northeastern area grain sorghum fields in early August. By mid-August, corn earworm larvae were 15+ per head in many fields. About 75% of the northeastern area grain sorghum fields was treated. Treatment was highly effective and populations decreased to 1 per head or fewer within a week.

Many reports of corn earworm feeding on grain corn were received from ILLINOIS. About 0.4% of the grain corn in the State was damaged by feeding. Some were additionally damaged because of ear rot pathogens entering ear tips on which earworm had fed. The overall impact of the corn earworm on grain corn in 1978 was difficult to assess. Sweet corn producers deal with this insect every year but grain corn producers seldom experience problems. In 1978 at least, as much as 5 million bushels of grain corn may have been damaged or destroyed by earworm.

Several corn earworm adults were caught at scattered blacklight trapping sites in WISCONSIN in mid-August. By late August, larvae were found in sweet corn in Dane County. Although significant populations were caught in blacklight traps, controls applied for European corn borer (Ostrinia nubilalis) in sweet corn kept corn earworm infestations to a minimum.

Corn earworm larvae in MISSISSIPPI first appeared on corn [whorl] during the first week of June in Newton and Oktibbeha Counties. Larvae were first noted feeding on ears June 16 in Pontotoc County at 0.2 per ear. Populations increased on early late-planted corn until mid-July with numbers ranging 0.5-2 larvae per ear. Larvae ranged 1-3 per ear on late-planted corn in the "hill sections" in late August. No statewide increase was experienced compared to 1977.

Corn earworm in FLORIDA remained the major reason for aerial spraying of sweet corn every 24-48 hours, once the silking stage was reached, to produce fancy grade sweet corn. This pest caused much less damage on corn and sorghum in SOUTH CAROLINA than in 1977. Infestations could be considered about normal. Overwintered adults in MARYLAND appeared June 2, one week earlier than normal, in the Eastern Shore counties. Adult activity remained unusually heavy through July 7, continuing the heavy population trends which characterized 1977. By the middle of July, heavy 5th instar populations infested the corn whorls and heavy second broods were predicted for most areas of the State. The second brood, however, was only 25% of the predicted levels, and caused no significant damage after July 14 in corn, soybeans, or lima beans. The estimated yield losses to field corn was 1%.

The first corn earworm adults taken in DELAWARE were in light traps in corn during late-May. Counts averaged about 3 per night in early June and 20 per night by late June. The first blacklight trap catch of the season for corn earworm in NEW YORK was June 19 on Long Island, and July 18 in the Finger Lakes area. The first appearance of larvae in sweet corn was July 14 in Ulster County. Fall collections of adults in blacklight traps in the Upstate areas appeared above normal, but too late to cause significant field infestations.

Economic cutworm infestations were scattered throughout MINNESOTA as in 1977. Infestations were localized in 25 counties by June 2, adding another 7 counties by June 23. The estimated damage to field corn was 5% or 122,000 ha (301,468 acres) which cost about \$1.9 million. DARKSIDED CUTWORM (Euxoa messoria) and DINGY CUTWORM (Feltia ducens) were the predominant species in 1978. Darksided cutworm larval infestations were first reported in field corn from Redwood County and in sweet corn from Nicollet and Blue Earth Counties during late

May through the first 2 weeks in June. Dingy cutworm adults first appeared in the southwestern district in late May and were trapped statewide until late July. Larval damage was scattered.

Approximately 1 ha (2 acres) of sweet corn was destroyed in Waseca County, Minnesota, by dingy cutworm. Larvae averaged 7 per 0.09 sq m (sq ft). Controls were excellent in the 8.8 ha (22 acres) of sweet corn treated in Waseca County. Light trap catches peaked to 242 per trap per night during August 23-29, in the southwest, south-central, and southeast districts. This late summer influx might prove to be a potential threat to corn in 1979. A scattered occurrence of GLASSY CUTWORM (*Crymodes devastator*) was reported in field corn from Meeker County. STRIPED CUTWORM (*Euxoa tessellata*) occurred throughout Minnesota during July 12-25. Adults averaged 103 per trap per night by July 19.

The first report of dingy cutworm damage in IOWA came from Calhoun County the week of May 12; larvae were 1 cm (0.5 in) long. Larvae 1-2.54 cm (0.5-1 in) long were found in corn following soybeans or alfalfa in Plymouth, Audubon, and Marshall Counties but had caused no economic damage. Dingy cutworms were a major problem in field corn in the western area by May 26. Most infestations were in corn following oats, chisel-plowed beans, or alfalfa. Leaf feeding damage was noted on 30-90% of the plants in 3 Calhoun County fields at this time. Light cutworm damage was observed in the central area during the week ending June 9. Indications of feeding were seen on about 4% (ranged 10-15%) of the plants sampled in 10 Boone County corn fields during the second week of May. Damage reports decreased by the week of June 15. Dingy cutworms caused serious economic damage to about 20% of the corn or about 1.1 million ha (2.6 million acres) in the State. Dry soil conditions over much of the State generally made emergency treatments ineffective. Severe infestations are anticipated in parts of Iowa in 1979.

Several reports of glassy cutworm in IOWA were received during the season. The first report of economic damage came from Franklin County, May 28. Larvae ranging from 0.64 to 3 cm (0.25-1 in) long were reported from 2 Howard County fields of corn following alfalfa and 2 corn-following-grass fields in Floyd County on June 5. Damage was reported from Cerro Gordo, Allamakee, and Clayton Counties in northeastern Iowa during the first week of June. Rescue and spray applications were not effective against this pest.

BLACK CUTWORM (*Agrotis ipsilon*) adults in NEBRASKA were first noted in Clay County on May 11 and in Lancaster County on May 12. Adult activity increased in the east and southeast districts, May 18-29. Economic infestations consisting of this species, DINGY CUTWORM (*Feltia ducens*), and DARKSIDED CUTWORM (*Euxoa messoria*) were reported in corn in scattered fields throughout the south, central, southeast, east, and northeast districts, June 1-22. Stand losses ranged up to 100% and averaged 10-30%.

The majority of the severe cutworm infestations in Nebraska were centered in the southeast and northeast districts. Chemical controls applied in the southeast district between June 1-8 were relatively effective, partially as a result of good surface soil moisture which kept the majority of the cutworms within 1 cm (0.5 in) of the surface. Dry, windy weather in the region during June 9-14 caused the soil surface to dry out and crust, decreasing the effectiveness of the control. Reports of stand losses to corn [30+ cm (12+ in) extended leaf height] were received through the last week of June.

The first male black cutworm adults in IOWA were collected in baited traps in the southern area on the nights of April 29 and 30; some eggs were found on May 8. The first reported economic loss involved 16 ha (40 acres) of a 32-ha (80-acre) corn field in Fremont County during the week of May 28. Activity increased during the week of May 29 with damage reported from Allamakee, Clayton, and Greene Counties. Larvae from Greene County ranged from 1 cm (0.5 in) to 3.8 cm (1.5 in) long.

In Fremont County, Iowa, 400+ ha (1,000+ acres) were replanted as a result of black cutworm damage by June 6. Widespread infestations by this species and dingy cutworm (*Feltia ducens*) caused extensive replanting in the southern and central areas by the week ending June 16. Chemical treatments in these areas were hampered by dry soil conditions. Infestations caused severe economic damage to about 10% of the corn or about 530,000 ha (1.3 million acres) in the State.

Black cutworm adults in ILLINOIS were reportedly first taken in pheromone traps in the central area during the first week of April. The earliest records of adult flights were believed to involve overwintering forms instead of migrants. Some egg laying was suspected during the second week of April, and 2nd instar larvae were found on weeds in St. Clair County during the third week. By the fourth week of April, the adult flight, as monitored with pheromone traps, was very heavy in the central area.

Fall weather in Illinois in 1977 restricted clean plowing, resulting in excessive trash on the soil surface. Spring weather in 1978 was unfavorable for fieldwork, resulting in heavy weed growth present until just days before the corn was planted. These conditions combined to make 1978 one of the worst years of black cutworm infestation on record. Approximately 610,000 ha (1.5 million acres) were emergency treated for black cutworm in 1978 as opposed to 27,923 ha (69,000 acres) treated in 1977. An estimated 160,000 ha (400,000 acres) were replanted in 1978 due to cutworm damage.

Reports of corn damage by black cutworm in KENTUCKY began in mid-May. It was not until early June that the severity of the problem became apparent. Although damage was reported statewide, the problem appeared to be the worst in the Ohio River bottoms of Henderson and the surrounding counties. Several thousand acres in that area required treatment, and stand reductions of 30-70% were common. In some instances, treatments were not effective because larvae were about half grown and feeding below ground. In several cases, multiple treatments were applied. Many growers were unable to switch to other crops due to herbicide restrictions and were forced to replant and suffer reduced yields due to the delayed planting date. About 4-5% of the corn acreage in the State was treated during the growing season.

The first blacklight trap catch for black cutworm in INDIANA was taken April 13 in Lawrence County; the peak flight there occurred July 6-12. There were some severe infestations in Gibson and Posey Counties, with more scattered and lighter infestations in the rest of the southwest and in the west-central districts. While the loss in corn in some fields was heavy, poor germination due to the earlier rather dry conditions was sometimes blamed on cutworm infestations. Larvae in MISSISSIPPI caused problems on seedling corn and sorghum during late May to late June, mainly in the "hill section" counties. Stands were reduced 80-85% in some fields in Oktibbeha, Newton, Madison, and Lauderdale Counties causing growers to replant. The heaviest larval population was 2.5 per 0.3 row m (row ft) on 121 ha (300 acres) of seedling corn. Populations decreased by mid-July.

Field sampling and grower reports in NORTH CAROLINA indicated that poor growing conditions contributed to black cutworm damage in the Piedmont area. Damage first appeared spotty and most frequently in minimum-till plantings. However, damage reports and subsequent surveys in the Coastal Plain indicated the problem was severe in spots statewide. Damage peaked June 9 and began decreasing June 16. The counties in the central Piedmont area received the heaviest damage with 25-35% stand losses commonly reported in Person, Stokes, and Yadkin Counties. Up to 25% stand reduction was reported from widely scattered fields in the Coastal Plain area. Cutworm damage rarely exceeds 10% of plants lost in corn fields in the State.

Black cutworm infestations on corn in MARYLAND were the heaviest in the past 7 years statewide. An estimated 8,000 ha (20,000 acres) were moderately to heavily infested in the Eastern Shore counties. Serious damage first appeared the first week of June in poorly drained areas and field edges, especially in no-till or chisel-plowed fields. By the middle of June, many growers were applying chlorinated camphene and dimethyl phosphate with mixed results; some fields in Kent County were replanted twice with controls. Statewide, 1,214 ha (3,000 acres) needed replanting. Yield loss was estimated at 10% or 400,000 bu. The first blacklight trap catch of the season in NEW YORK was taken on Long Island the week ending May 12. The first adult males of the season were taken in pheromone traps on the same date in Tompkins County. Blacklight trap catches, as of the week ending May 28, were occurring in the Hudson Valley and Central regions, but early pheromone trap catches were significantly greater statewide. Larval infestations of field corn were observed in Monroe County June 13 and in Wayne County June 23.

WESTERN BEAN CUTWORM (Loxagrotis albicosta) populations in IDAHO were heavy enough to require treatment in about 40% of the processing corn fields near the Twin Falls area.

VARIEGATED CUTWORM (Peridroma saucia) in MINNESOTA ranged 1-5 per field corn plant in Jackson County and caused extensive damage to a 16-ha (40-acre) field. About 1,800 ha (4,000 acres) of corn were treated of which field corn covered 600 ha (1,483 acres) and sweet corn 1,200 ha (2,965 acres) at a total cost of more than \$40,000.

SORGHUM WEBWORM (Celama sorghiella) larvae in ARKANSAS reached 8-10 per head in some northeastern area grain sorghum fields in late August.

STALK BORER (Papaipema nebris) infestations in field corn in NEW YORK were observed June 13 in Monroe County and June 23 in Wayne County. The frequency of field corn infestations appeared to be above normal.

POTATO STEM BORER (Hydroecia micacea) larval infestations in NEW YORK were found in northwest Monroe County, June 7, with 10-15% stand reduction of first-year field corn planting. A survey conducted June 13 and 14 detected infestations in Monroe, Orleans, and Niagara Counties. Infestations were noted June 18 in Jefferson County, in 13 sites throughout Lewis County, and in Herkimer County. All of the above infestations represent new county records. See CPPR 4(9):89. Infestations were common throughout the northern counties, where this borer has been known to exist 4 years. Adults were taken in blacklight traps the last week of July in northwestern Monroe County and also in Onondaga County, where no field infestations had been found as of December 1978.

Larvae of a NOCTUID MOTH (Hydroecia immanis) infested field corn in Onondaga County, NEW YORK, and destroyed about 50% of a 10-ha (25 acre) planting in early July. Larvae were still present in the field as of August 4, but most of the population had pupated. This infestation represents the first economic infestation of corn by a pest previously known to be a pest on hops, which are no longer an economic crop in the State.

WESTERN CORN ROOTWORM (Diabrotica virgifera) populations in IDAHO appear to have been confined only to Franklin and Oneida Counties. The adult populations seemed to have done the most serious damage. Serious problems developed in fields where corn followed corn in rotation unless treatments were applied.

CORN ROOTWORM (Diabrotica spp.) egg hatch in eastern NEBRASKA was delayed by cool, moist weather. Hatch was recorded at the Mead experiment station, Saunders County, June 21. Larval activity was reported in Hamilton and Dawson Counties on June 20. Larval populations were light at the Mead station and ranged only up to 18 per plant in the test plots on June 28. Gravid female beetles were present in fields surveyed in Buffalo and Lincoln Counties by August 2. Averages of beetles per plant ranged up to 5 per plant in Buffalo County on August 2, 4.3 per plant in Lancaster County on August 9, and 6 per plant in Dawson County on August 11. Economic damage due to larval root feeding was minimal statewide and no reports were received of poor pollination due to silk clipping by adults.

Light to moderate larval and adult corn rootworm populations were observed on corn in IOWA. Infestations were lighter than in 1977. Heavy populations were expected in 1978 based on heavy beetle populations and heavy egg laying in 1977. However, egg survival was light due to severe and prolonged cold temperatures in January and February 1978. Further egg mortality may have resulted from a cool, wet spring. Larvae, 1st and 2nd instar, were reported first on corn in Story County during the week ending June 23. Egg hatch was 75% by June 20. Larvae, 3rd instar, were reported from fields in the central area from June 27 through July 13. Economic damage was slight. Many corn plants inspected for larval feeding showed considerable regrowth as a result of adequate June moisture.

During the week ending July 7, most root feeding by corn rootworms in Iowa was completed and pupae were present in corn fields. Beetle emergence was reported as early as July 3 in Muscatine County. During the week ending July 14, beetles were present in Black Hawk, Clarke, Hamilton, Hardin, Story, and Webster County corn fields. Peak emergence for both western and NORTHERN CORN ROOTWORM (Diabrotica longicornis) adults occurred somewhat later in 1978 compared with the 1977 emergence. Peak western corn rootworm emergence occurred during the week ending August 2 from a field in Story County and during the week ending August 11 from fields in Hamilton and Webster Counties. Peak northern corn rootworm emergence occurred during the weeks ending August 19, September 2, and September 7 from fields in Hamilton, Webster, and Story Counties, respectively. Beetle emergence continued through September but decreased dramatically after the peak. Corn rootworms were rather light Statewide during 1978. Larval damage is not expected to be severe in any area of the State in 1979.

Western corn rootworm in NORTH DAKOTA was collected on corn in the rural areas of Emmons, McKenzie, and McLean Counties for new county records. See CPPR 4(1):3.

Northern corn rootworm and western corn rootworm adult surveys in MINNESOTA were taken in 57 counties and 221 corn fields that were in corn the previous year. The average number of beetles per 0.4 ha (1 acre) 1978 by district (compared to 1977) was as follows: West-central--17,801 (36,411), central--20,842 (30,951), east-central--5,095 (30,314), southwest--34,331 (36,392), south-central--16,816 (33,216), and southeast--34,109 (56,452). The statewide average was 21,499 (34,109). The ratio of Diabrotica longicornis to D. virgifera was 89:11 compared to 83:17 in 1977. Lodging was less than 1% in all districts except in the south-central district which had 1.60% compared to 0.65% in 1977. In 1978, about 20% of the field corn or 480,000 ha (1,186,099 acres) was treated for control. The estimated control costs at the rate of \$17.50 per ha (2 acres) \$8.4 million.

Corn rootworm egg hatch in ILLINOIS was well underway in the central areas during the third week of June. Beetle emergence began about the second week of July in the central areas. Late planting of corn resulted at least partly in reduced larval damage and also resulted in light beetle populations later in the season. The State average of 60 per 100 plants in 1978 was about half of that in 1977. About 100,000 ha (300,000 acres) were treated, much of this treatment was probably unnecessary. Very little damage, either from larvae or adults, was observed except in isolated fields of continuous corn where no treatment was applied. Western corn rootworm was collected in Saline County near Eldorado (see CPPR 3(44-47):612) and in Lawrence County near St. Francisville (see CPPR 4(8):79) for new county records.

Corn rootworm eggs in WISCONSIN were noted at 11.31 per 0.6 L (pint) of soil in the fall of 1977, a 25% decrease from the 1976 fall survey. Laboratory hatch of the overwintering eggs was 88% which is near normal. The first hatch in the field was observed in Walworth County in mid-June. In early July, 11 larvae per corn root were observed on corn [knee-high] in Rock County, where there was an apparent insecticide failure or no insecticide applied. Beetles began emerging in mid-July in the southernmost tier of counties but the peak emergence did not occur until early August. There were few instances of poor corn pollination due to beetle feeding. In the summer survey, beetles averaged 0.8 per plant statewide, the lightest since 1973; however, population averages for several of the districts were near the level which indicates damage could occur in 1979 if some form of control were not used.

Western corn rootworm in INDIANA averaged 5.84 per trap per day in sticky traps in an untreated field of grain corn in Tippecanoe County in 1977, peaking during the week ending August 4 and reaching 50% of the total for the year during the same week. In the same field in 1978, the average from the first flight to September 22 was 7.52 beetles per trap per day, peaking during the week ending September 14 and reached 50% of the total for the year by August 31. The first trap catch of the year occurred during the week ending July 19, this was 19 days later than in 1977. The total catch in 1978 was 5,938 compared with 5,374 in 1977.

Northern corn rootworm in Indiana averaged 13.15 per trap per day in sticky traps in an untreated field of grain corn in Tippecanoe County from the first flight to September 23, peaking the week ending July 21 and reaching 50% of the total for the year during the following week. In the same field in 1978, the average from the first flight to September 22 was only 3.18 beetles per trap per day, peaking during the week ending August 17 and reached 50% of the total during the week ending August 24. The total catch in 1978 was 2,513 compared with 12,096 in 1977.

Northern and western corn rootworms in Indiana averaged as follows during a survey of an average of 4 fields per county by district (number of counties surveyed per district) August 7-16: Northwest--0.39 (8), north-central--0.72 (5), northeast--0.71 (8), west-central--0.51 (9), central--0.84 (8), and east-central--0.81 (7). The low average in the northwest district is due to time of sampling relative to crop maturity and does not reflect actual numbers. In the northern districts 70-100% of the beetles were Diabrotica virgifera and in the central district 50% were this species. The generally lighter populations were due to the late planting of the corn. The fall egg-laying period was almost ideal and the total egg numbers should not have suffered a real decrease.

The need for control of Diabrotica virgifera and D. longicornis in Indiana decreased from 60% in the northern 2 tiers of counties to 10% or less south of Indianapolis. An independent survey indicated 43% of the acreage treated, which at \$8 per 0.4 ha (acre) amounts to nearly \$21 million for treatment alone. Because growing conditions were generally excellent, economic losses were difficult to observe even when root systems were relatively heavily damaged. D. virgifera was collected in Orange, Bartholomew, Jennings, Jefferson, and Washington Counties for new county records. See CPPR 3(32):433; 3(34):475; 3(38):540; and 3(40,41):569.

Western corn rootworm in OHIO was collected from corn in Butler, Clark, Clinton, Delaware, Fayette, Franklin, Greene, Lorain, Madison, Montgomery, Union, and Warren Counties for new county records. This pest is now found throughout most of the corn-growing areas of the State. See CPPR 3(35):496 and CPPR 4(8):79.

The first northern corn rootworm adult activity of the season for NEW YORK was reported in the western area the week ending July 28. Populations of 10 or more adults per corn plant were observed in Cayuga County, August 18, although lodging did not appear to be a problem in the fields inspected. Significant lodging of field corn was reported by September 15 in Saratoga and Washington Counties.

CORN FLEA BEETLE (Chaetocnema pulicaria) - See STEWART'S WILT (Erwinia stewartii) above.

MAIZE BILLBUG (Sphenophorus maidis) in OHIO was much heavier and more noticeable than in 1977. Damage was primarily to corn planted late due to the wet weather in the early part of the season. Corn [4 to 9-leaf] plants were damaged in late June and early July. Damage by adults of this species and SOUTHERN CORN BILLBUG (S. callosus) in NORTH CAROLINA was again the major soil insect concern to corn growers in the Tidewater and Coastal Plain counties including those south of Johnston, Wilson, and Pitt Counties. The expansion of heavily infested areas continued in Johnston, Wayne, and Wilson Counties. The cold, wet spring delayed planting and growth in most areas, resulting in a long susceptible period for infestations. Estimates of 80% plant damage and 50% stand loss in 4.0+ ha (10+ acre) fields in Bladen, Pender, Columbus, and Robeson Counties were common. Infestations were similar in Washington, Tyrrell, Beaufort, and Hyde Counties. Replanting 4.0-8.0 ha (10-20 acres) was common, however, in most damaged fields the usual pattern was severe damage to the 5-15 border rows even where a soil insecticide was applied. Infestations could be found in 60% of the corn fields of the Tidewater and southern Coastal Plain counties.

SUGARBEET WIREWORM (Limonius californicus) infestations in IDAHO were serious enough to require replanting in untreated corn fields in the southwestern area.

SUGAR CANE BEETLE (Eutheola rugiceps) damaged corn in Lincoln County, TENNESSEE, for the second consecutive year. Damage was also reported in McNairy County.

A few SUGAR CANE APHID (Melanaphis sacchari) specimens were collected in the Belle Glade area of FLORIDA during July 1977 and again in this area and throughout the Everglades sugarcane-growing area in 1978 for a new continental United States record. See CPPR 3(34):475. About 400 ha (1,000 acres) were so heavily infested that controls were needed to decrease sooty mold that had formed on honeydew.

CORN LEAF APHID (Rhopalosiphum maidis) in OKLAHOMA was present in corn and sorghum from early May to late August. Heavy infestations were reported in scattered areas in the second half of June and July but damage was not serious. Developing aphid colonies in ILLINOIS were noted in 60% of the corn fields examined in the northern area by the second week of July. Problems were expected to be especially severe due to late planting of corn in 1978. Although 100% of the plants were infested in many fields by the first week of August, populations per plant did not reach the treatment threshold. Most plants had fewer than 50 aphids per tassel region and with full unrolling of tassel leaves these populations decreased. Few of the fields treated for corn leaf aphid actually benefited from the treatment.

Corn leaf aphid infestation in INDIANA on 'Kentucky 27', a variety of corn used as a base line indicator of aphid pressure, was so heavy that many tassels failed to develop. Infestations averaged 164 per plant on a single cross (Nebraska 28 x B37), about 3 times the 1977 levels. In general, field populations during the annual corn survey of 41% infestation, did not differ greatly from the 1977 level of 32%. The important difference was among the levels of infestation. Only 1% had heavy infestations in 1977, as compared with 8% in 1978, and moderate infestations increased from 2% to 11% in the same time. The incidences were widespread except for generally lighter infestations in the northern districts.

Greenbug (Schizaphis graminum) caused some damage and spraying of sorghum in many areas of TEXAS. Wider distribution of resistance varieties has helped to reduce damage. Scattered light to heavy populations, but no general heavy infestations, were noted on sorghum in the eastern and southern counties. Infestations were first found on sorghum in OKLAHOMA in Texas County in late May but were virtually eliminated by heavy rains by the end of the month. Light populations were again found by the middle of June. Populations were light in all areas through July. During August heavy infestations were present in some areas of the Panhandle counties but populations remained light to occasionally moderate in all other areas of the State. Infestations had virtually disappeared by September 1.

Greenbug populations in NEBRASKA were generally light during 1978 with few economic infestations reported on sorghum. Parasitism by Lysiphlebus testaceipes (an aphidiid wasp) increased until sorghum fields surveyed in Gage County were virtually aphid free by June 14. Trace numbers of aphids were reported on sorghum in the northeast district on July 27. Aphid populations generally increased through mid-August with 1 sorghum field in Lancaster County averaging 667 greenbugs per plant on August 9. A few unconfirmed reports of an excess of 1,000 greenbugs per plant on sorghum were received from some areas of the east district but damage was generally confined to some reddening of the leaf tissue in most infested fields. Infestations declined from mid-August due

to large population buildups of Lysiphlebus testaceipes and aphid predators, predominately Hippodamia spp. (lady beetles) and Chrysopa spp. (green lacewings). Greenbug infestations were reduced below damaging levels by the first week of September. Yield losses were minimal and scattered.

STINK BUGS, mainly SAY STINK BUG (Chlorochroa sayi), caused severe damage to sorghum in Luna County, NEX MEXICO, in August. Counts often ranged up to 40 adults per head. Many growers treated fields 2 or 3 times to control this pest. Approximately 12,000 ha (30,000 acres) required treatment.

Migration of CHINCH BUG (Blissus leucopterus leucopterus) from wheat into adjoining corn and sorghum fields in NEBRASKA had begun by the second week in June and continued in some areas until wheat harvest. While both corn and sorghum were infested, sorghum suffered the greater damage. Chinch bug damage in some areas was compounded by crusted soil and damping off fungi. Many sorghum fields planted in wheat stubble suffered 100% stand losses.

In some areas chinch bug migrated out of the wheat prior to wheat maturity and moved into sorghum field at or shortly after planting. In these situations entire stands were destroyed and in some cases the replanted stands were lost as well. In fields in which the more typical chinch bug migration occurred at or near wheat maturity it was not unusual for 30 or more border rows of sorghum to be destroyed before the bugs dispersed throughout the fields and the surviving plants matured sufficiently to sustain the decreased number of bugs. One such sorghum field in Lancaster County averaged more than 1,200 bugs per plant along the migration front during peak migration in that field on July 5. Stand losses in sorghum throughout the problem area were being reported through July 27. Egg laying by second generation chinch bug adults occurred over an extended period and was still going on in Saline County, Nebraska, sorghum fields as late as July 27. As a result of this extended egg laying activity, immatures were present in many corn fields after harvest.

The fall 1977, chinch bug survey in INDIANA showed no infestations with potential economic consequences. Populations have been on the increase, however, in the east-central and northeastern sections of the State. Adults were observed during the summer on the tassels (in 1 case) and under leaf sheathes (in several cases) in the fall, the first that has been observed in at least 10 years..

SORGHUM MIDGE (Contarinia sorghicola) caused very little damage to sorghum throughout TEXAS due to early and uniform planting. Only very late-planted fields required treatment. Damaging populations in MISSISSIPPI were first reported August 6 in Rankin County. Sorghum, blooming in late August, was damaged the most with 10-15% seed loss in the southern counties.

SEEDCORN MAGGOT (Hylemya platura) in OHIO destroyed up to 18% of the corn seed planted before May 26. Cool, wet weather early in the season led to favorable conditions for heavy populations.

GRASSHOPPERS, mainly Melanoplus differentialis, defoliated spots of 0.2 ha (0.5 acre) in size along field margins throughout NORTH CAROLINA during 1978. Insecticidal treatment was unwarranted in most of the infestations in corn. Grasshopper damage is rare in the State. However, threshold level infestations occurred in forage and pastures of the Piedmont area. Grasshoppers caused widespread damage to most all field crops throughout TENNESSEE. Controls were applied in many instances on corn and soybeans.

Heavy BANKS GRASS MITE (Oligonychus pratensis) infestations in OKLAHOMA were reported on corn in Texas and Caddo Counties from late June to mid-August. A number of fields were treated but control was generally poor. Colonies of this species and TWOSPOTTED SPIDER MITE (Tetranychus urticae) in NEBRASKA were first noted on corn in Dawson and Dundy Counties in the southwest district, July 7 and in scattered fields in the northeast district July 27. Infestations were also noted in 5 corn fields in Scotts Bluff and Morrill Counties, August 17. The first economic infestation was reported in 4 corn fields in Buffalo County, August 2. Colonies were present up to the tassels throughout the fields and mite feeding activity had resulted in dead leaves above the ears on some of the plants. Infestations developed slowly in the southwest and northeast districts. Of 199 corn fields surveyed in the southwest district, 9 developed economic infestations prior to corn maturity.

TWOSPOTTED SPIDER MITE (Tetranychus urticae) in VIRGINIA caused damage along the borders of scattered corn fields in the southeastern area in July. Significant damage was noted in Isle of Wight County and the Independent City of Suffolk. Damage was also noted in Middlesex County, July 27. Statewide, damage was lighter than usual.

SMALL GRAINS

Highlights

SPECKLED LEAF BLOTH caused 1% loss of wheat in Kansas and developed up to 100% severities in Ohio. This disease and SEPTORIA GLUME BLOTH were the most serious foliar diseases of winter wheat in Missouri. WHEAT POWDERY MILDEW losses in wheat increased in Kansas and was widespread in Ohio and Michigan. TAKE-ALL was more widespread on wheat in Kansas and caused more loss. WHEAT SPINDLE STREAK MOSAIC VIRUS was widespread on wheat in Ohio. Losses caused by WHEAT STREAK MOSAIC VIRUS and SOIL-BORNE WHEAT MOSAIC VIRUS resulted in an estimated loss of over 21 million bushels of wheat in Kansas. HESSIAN FLY increased on wheat in Oklahoma, reduced yields in North Dakota, might be increasing in Illinois, and increased in Indiana.

DISEASES

WHEAT LEAF RUST (Puccinia recondita f.sp. tritici) in KANSAS developed slowly on wheat until mid to late May when it increased rapidly and did not become distributed statewide until early June. By then, it was too late to cause much damage except to late-planted susceptible varieties, especially in the central and northern area. The estimated loss was 1.5% or 4,590,000 bushels compared with 1.0% in 1977. Wheat leaf rust was detected on seeded wheat in the northeast and east-central districts, and on seedling wheat in September and October.

Wheat leaf rust was not noticed on wheat in the early growing season in MICHIGAN. The absence of rust may be attributed to the prevailing lower temperatures in May. However, by the end of June and early July, the prevalence of 60% with the severity of 1% was observed on some cultivars. It was too late to cause any significant damage to the wheat crop of 1978.

LOOSE SMUT (Ustilago nuda) was more obvious on wheat in KANSAS in 1978 than in 1977. The south-central district was most affected. Infections were reported in trace amounts from a number of counties in all districts except the 3 western districts.

Surveys for loose smut on small grains in 15 counties in the northwest and west-central districts were completed in MINNESOTA on July 14. Prevalence by county (averaged) from counts taken in 5 rows (3.00 m (9.84 ft) in 5 fields): Kittson--1.7%, Mahnomen--2.0%, Marshall--2.2%, Norman--1.8%, Pennington--1.9%, Polk--1.6%, Red Lake--1.9%, Big Stone--0.51%, Douglas--0.63%, Grant--0.55%, Ottertail--0.86%, Stevens--0.14%, Swift--0.36%, Traverse--0.17%, and Wilkin--0.20%.

The Barley Smut Laboratory in Minnesota processed 460 samples from the 1977 barley crop received from the northwest and west-central districts. The average infection was 3.38 (northwest) and 2.85 (west-central). In both field surveys and laboratory tests the infection level was below the 4% recommended for seed.

SEEDLING BLIGHTS (Helminthosporium spp.) were evident on seedling wheat in September and October in KANSAS and could be found in nearly every wheat field surveyed. However, prevalences were light.

SPECKLED LEAF BLOTHC (Septoria tritici) was distributed statewide in KANSAS in 1978. It was present on wheat from mid-March through harvest. Prevalence was near normal in the 6 central and eastern districts, but was above normal in the 3 western districts. The estimated loss was 1.0% or 3,060,000 bushels compared with 0.5% in 1977.

Speckled leaf blotch in OHIO was prevalent with 100% incidence in 23 wheat fields (representing 23 counties) surveyed. This disease was present in the southern counties as early as May 19 when wheat was in the jointing stage of development. Severities in trace amounts at jointing developed to 100% on the lower 3-4 leaves by beginning flowering and had progressed to upper leaves by ripening.

SEPTORIA GLUME BLOTHC (Leptosphaeria (Septoria) nodorum) and speckled leaf blotch were the most serious foliar diseases of winter wheat this season in MISSOURI. Commercial wheat fields had 100% prevalence and 10-50% severity. The wet spring conditions were probably responsible for the high incidence.

Isolated wheat plants in MICHIGAN infected with SEPTORIA COMPLEX (Septoria spp.) were observed in June. By the end of July, some counties had 80% prevalence with 1% severity. Cooler temperatures in the growing season were considered conducive for disease development. Since it became prevalent late in the growing season, it did not cause any significant damage.

WHEAT POWDERY MILDEW (Erysiphe graminis f.sp. tritici) caused an estimated 0.5% or 1,530,000 bushel loss in 1978 compared with an estimated 0.2% in 1977 in KANSAS. This disease was most prevalent in thick-seeded heavily fertilized wheat in the eastern two-thirds of the State.

Wheat powdery mildew was one of the most widespread diseases of wheat in OHIO in 1978. This disease was present to some extent in all fields surveyed. Disease prevalence was usually 100% by the beginning flowering stage of development in mid-June. Severities ranged from trace amounts to 30% on lower leaves at jointing and infection was found on flag leaves and glumes in some fields by milk stage of development.

Wheat powdery mildew was widely distributed in wheat in MICHIGAN. The disease appeared in late April, but increased to 80-90% in prevalence with 60-70% severity in some counties by the end of June. Cooler temperatures that prevailed during most of the growing season were probably responsible, in part,

for the severity of the wheat powdery mildew. The primary source of the inoculum for the widespread occurrence of the disease might be from the infected wild grass hosts that were adjacent to the wheat fields. Wheat powdery mildew caused appreciable loss this year in Michigan.

TAKE-ALL (*Gaeumannomyces graminis* var. *tritici*) was considerably more widespread on wheat in KANSAS in 1978 than in 1977. In 1978 this disease was reported from all crop reporting districts except the west-central. In 1977, take-all was reported from only the south-central, southeast, and east-central districts. Estimated loss is 2.0% or 6,120,000 bushels compared with 1.0% in 1977.

TAN SPOT (*Pyrenophora trichostoma*) caused an estimated 1.0% or 3,060,000 bushel loss in 1978 in KANSAS. This is less than the estimated 3.0% loss in 1977 when this disease was found in nearly every wheat field surveyed. This disease was most obvious in the eastern two-thirds of the State and prevalence varied widely from field to field. Tan spot was evident on seedling wheat in September and October. Pseudothecia were abundant on stubble in some fields, especially in the north-central district.

CEPHALOSPORIUM STRIPE (*Cephalosporium gramineum*) caused an estimated loss in KANSAS of 0.9% or 2,754,000 bushels of wheat compared with an estimated 1.0% in 1977. It was reported from all 6 central and eastern districts with parts of the central and south-central districts being most affected. Some fields in McPherson County in the central area were so severely infected with cephalosporium stripe and WHEAT STREAK MOSAIC VIRUS that they were destroyed before harvest.

SCAB (*Fusarium* spp.) was the most serious problem on wheat heads and seeds in MISSOURI. As a result of the wet spring conditions, many commercial fields were 100% infected, resulting in shriveled grain and reduced yields.

SPOT BLOTCH (*Cochliobolus (Helminthosporium) sativus*) was especially severe on barley and certain wheat cultivars in MISSOURI, affecting up to 25% of the leaf area. It was observed throughout the State.

DRYLAND ROOT AND FOOT ROT (*Helminthosporium* spp. and *Fusarium* spp.) complex was prevalent in the western one-third of KANSAS, especially in areas where the wheat was drought stressed. This was most obvious in parts of southwest and north-central Kansas. Estimated loss is 1.8% or 5,508,000 bushels.

ASTER YELLOWS MYCOPLASMA - See ASTER LEAFHOPPER below.

WHEAT SPINDLE STREAK MOSAIC VIRUS (WSSMV) was widespread in OHIO wheat fields in 1978. A prolonged cool spring was ideal for symptom expression by this virus. Of 15 samples collected from 13 Ohio counties, 11 proved positive for WSSMV based on a 2-way evaluation consisting of mechanical inoculation of wheat and electron microscopy of virus particles. A few samples contained both WSSMV and WHEAT STREAK MOSAIC VIRUS. Verification tests for virus were conducted by Ohio Agricultural Research and Development Virus Research Unit. Many other fields and variety trial plots showed similar symptoms but verification trials were not conducted.

Much less volunteer wheat was present in KANSAS during the summer of 1978 than in 1977 due to a drier summer. However, wheat streak mosaic and WHEAT CURL MITE (*Eriophyes tulipae*) were observed in volunteer wheat in parts of south-central

KANSAS where wheat streak mosaic was most obvious in the 1978 wheat crop. Traces of wheat leaf rust were observed on volunteer wheat only in the south-central district.

Wheat streak mosaic virus was prevalent in Kansas in 1978 and caused an estimated loss of 3.5% or 10,710,000 bushels compared with an estimated 1% in 1977. The most severely infected area included parts of Ford, Barber, Hodgeman, Clark, Comanche, Kiowa, Edwards, Pawnee, Stafford, and Pratt Counties. The outbreak of this virus disease had its beginning in June and July 1977 when rains slowed harvest and increased the emergence of volunteer wheat across Kansas. The warm weather extending into November allowed populations of *E. tulipae*, the vector of wheat streak mosaic virus, to build up in seeded wheat in parts of central and south-central Kansas. Wheat streak mosaic virus was observed as early as March 30 in Stevens County in southwestern Kansas. Losses from this disease could have been reduced had more volunteer wheat been destroyed before the wheat was seeded in the fall.

SOIL-BORNE WHEAT MOSAIC VIRUS in KANSAS caused an estimated loss of 3.5% or 10,710,000 bushels compared with an estimated 5% in 1977. Traditionally, this virus disease has been most prevalent in the continuous wheat areas of south-central and central Kansas and can be found in most counties in the eastern two-thirds of Kansas. Warm weather in March caused symptoms to fade rapidly, but cool weather in April and early May allowed symptoms to reappear and cause damage, especially in northern Kansas.

BARLEY YELLOW DWARF LUTEOVIRUS was more prevalent on wheat in KANSAS in 1978 than in 1977 largely due to an increase in the aphid vector populations. However, prevalence of this viral disease was below epidemic levels observed in 1976. Barley yellow dwarf luteovirus was widely scattered across the 6 central and eastern districts. No reports of this disease were received from the 3 western districts. Estimated loss is 0.8% or 2,448,000 bushels compared with 0.5% in 1977 and 4.5% in 1976. Barley yellow dwarf luteovirus was first detected in April on barley at the Bradford experiment station (Boone County), MISSOURI. Prevalence in commercial and experiment station fields ranged from 50-80%. Wheat was uniformly infected in many areas of the State by late April and prevalence ranged from 5-25%. Severity was limited as evidenced by very low effects on yields.

INSECTS

The first ARMYWORM (*Pseudaletia unipuncta*) larvae in OKLAHOMA were reported in wheat in the north-central area the second week of May. During late May and early June moderate to heavy numbers were found in many north-central, central, and west-central counties and a few northwestern and south-central counties. Damage was mostly to leaves and beards with reports of head clipping being rare in all areas.

A light armyworm adult flight was detected by light traps across IOWA during 1978 in contrast to the extremely heavy flight of 1977. Major early season adult activity occurred during the last week of June. The first reports of economic damage to corn and oats came from Marshall County during the week of June 23. Armyworms destroyed up to 50% of the stand in 3 Poweshiek County oat fields during the week ending July 7.

Armyworm light trap catches in MINNESOTA indicated large numbers of adults from mid-June to the end of June, especially in southwest and south-central districts. First report of the season occurred during the week of June 19 in a

12-ha (30-acres) wheat field in Sibley County. Armyworm larvae averaged 0.27 per sq m (1 sq yd). Traces of larvae were also reported in wheat from Redwood and Cottonwood Counties during the week of June 26. By July 7, the following counties had reported larval infestations. Wheat and oat fields in Dakota, Dodge, Goodhue, and Mower Counties had larvae ranging from 0.09 to 0.27 per sq m. Trace numbers occurred in Freeborn, Le Sueur, Waseca, Lincoln, Lyon, and Pipestone Counties. Polk County had fewer than 0.09 larvae per sq m in lodged barley.

Armyworm larval populations in Minnesota built up to economic levels 0.45 per sq m by July 28. Populations ranged from 1.6 to 4.8 per sq m in Pennington, Polk, Red Lake, Marshall, Norman, and Mahnomen Counties in barley. About 400 ha (900 acres) were sprayed in eastern Polk County. Scattered small grain fields in Chippewa, Grant, Ottertail, and Swift Counties had larval counts of up to 1.08 per sq m. About 320 ha (790 acres) were treated. Two 16-ha (40-acres) wheat fields were treated in Sibley County where larvae averaged 4.5 per sq. Survey showed over 6,000 ha (10,000 acres) of small grains were sprayed at a cost of about \$87,000.

Armyworm adults in ILLINOIS were taken at lights as early as the first week of April. These were believed to be overwintering adults. First larval collections were from grassy areas in the southern half of the State during the second week of May. Armyworm problems in small grains were for the most part nonexistent except in very lush fields. One lush White County small grain field had an average of 7 half-grown larvae per 0.3 row m (row ft). Light infestations were noted in northwestern Illinois oats; however, these infestations remained well below the economic threshold.

Although heavy armyworm adult populations failed to appear in blacklight traps, heavy localized infestations occurred in oats, principally in the west-central, north-central, northeast, and east-central counties of WISCONSIN. Most heavy infestations were observed early and treated to prevent serious damage to the oat crop. About 4,650 ha (11,500 acres) were treated in 1978. First armyworm larvae of the season in KENTUCKY were found in a Todd County wheat field on May 18. Larval populations on small grains were abnormally light throughout the State and less than 1% of the wheat acreage was treated.

Damage was also reported from Delaware, Dubuque, and Howard Counties, IOWA. Late instar larvae caused economic damage to 14 oat fields in Howard, Linn, Palo Alto, and Cerro Gordo Counties by July 14. Localized infestations of armyworms in oats and corn are expected in 1979.

From Accomack County, VIRGINIA, armyworm adult collections finally dropped off during the week prior to May 23, 1978. Larval populations were surprisingly small in view of the heavy adult catches in the previous weeks. On May 26, 1978, armyworms were reported to have hatched in the Independent City of Virginia Beach. Larvae were feeding on the foliage of wheat but scattered head clipping soon followed. Overall damage was light throughout the spring. However, as late as August 25, very heavy flights of armyworm adults had occurred during the previous several days.

Damaging infestations of FALL ARMYWORM (*Spodoptera frugiperda*) in OKLAHOMA were found in young wheat in a few scattered fields in the south-central, west-central, central, Panhandle, and northwestern areas from mid-September to early November. The major insect pests of small grains in MISSISSIPPI were fall armyworm and ARMYWORM (*Pseudaletia unipuncta*). Populations of these pests were significantly lighter than in 1977 with damage confined to millet in Covington,

Forrest, and other southern counties. Fall armyworm damage in NORTH CAROLINA to recently seeded small grains declined from 1977. Less than 1% of the acreage had economic defoliation in 1978 compared to 15% of the acreage with economic damage during 1977.

As of April 6, feeding by ARMY CUTWORM (*Euxoa auxiliaris*) was evident on winter wheat in the southwestern area of NORTH DAKOTA. Some controls were applied. Surveys were conducted in the west-central, south-central, and southwest districts by April 28 with 29 winter wheat fields surveyed. All fields surveyed in the west-central and south-central districts were negative with 31% of the fields infested in the southwest. Early instar larvae at the rate of up to 18 per 0.09 sq m (sq ft) occurred with 1 field showing heavy damage.

EUROPEAN CORN BORER (*Ostrinia nubilalis*) larvae were infesting wheat in Seneca, Livingston, and Monroe Counties, NEW YORK, June 28-29. Infestations up to 20% were widespread on various wheat varieties in the western area the week ending July 8. Survey of Monroe County in early July found damage levels generally below 5%, but 1 site exhibited patches with 40 to 50% of the stems infested.

LESSER CORNSTALK BORER (*Elasmopalpus lignosellus*) in OKLAHOMA caused widespread heavy damage to young wheat in the south-central counties during October. Damage was also reported from some areas in the southeast, southwest, and west-central counties.

Adults of RICE WATER WEEVIL (*Lissorhoptrus oryzophilus*) were moderately heavy in east-central overwintering sites in late April on small grains in ARKANSAS. Leaf litter samples showed lower numbers by mid-May, and sticky trap catches indicated that emergence flights began sometime between April 26 and May 10. By late May, about 30% of rice fields checked were above treatment level. About half the rice fields flooded during late May to early June surpassed treatment level. In mid-August a late-planted rice field had an average 20 large larvae per 50 cc (3.1 cu in) soil core sample, a very unusual situation.

Late instar larvae of GRAPE COLASPIS (*Colaspis brunnea*) were found in several east-central and northeastern rice fields in late May in ARKANSAS.

HESSIAN FLY (*Mayetiola destructor*) numbers were lower in western WASHINGTON than in 1977. Highest densities occurred in Island and San Juan Counties, where a few small grain fields were seriously damaged. Parasites were abundant in heavily infested fields. Laboratory rearings from fly infested plants from Lopez Island resulted in an emergence ratio of 1:45, Hessian fly to parasite. Hessian fly was detected in only 2 eastern counties, Asotin and Grant; numbers were very light.

Hessian fly infestations in OKLAHOMA were more common in 1978 than in 1976 or 1977. Infestations were found in 60% of the wheat fields surveyed in the north-central, northeastern, central, east-central, and south-central areas. The average infestation for all fields was 8.6% compared to 1% in 1977 and number of puparia per 100 stems was 17.9 compared to 2.5 in 1977.

Hessian fly in NORTH DAKOTA first occurred during the week of June 12 to 16 with reports of 50% of hard red spring wheat field damaged in the south-central district. Larvae and pupae were evident at this time. By June 23, infestations ranged from Morton County north to Mercer County, south as far as Hettinger County and bordered on the west by Stark and Dunn Counties with a 20-30% reduction of yield in early seeded hard red spring wheat. Seventy percent of a single field in Morton County was severely damaged. By July 21, 1-5% of a

single field of winter wheat showed lodging in Adams County. As of July 27, heavy populations of Hessian fly were detected in hard red spring wheat research plots in the east-central district with lodging ranging from 8-10%.

Hessian fly populations, as determined through random sampling, were light again in 1978 in ILLINOIS. The State average of 1 puparium per 100 tillers is less than the 10-year State average of 2 puparia per 100 tillers. Samples taken in certified wheat in the annual Illinois Crop Improvement Association, U.S. Department of Agriculture, and Purdue Department of Entomology survey showed an average of 4 puparia per 100 stems, the highest level in 5 years. In general, Hessian fly problems may indeed be increasing, in spite of indications from the random survey.

Surveys of Hessian fly in wheat in 37 INDIANA counties by the U.S. Department of Agriculture and others indicated an increase in both rate of infestation and number of puparia. The mean percentage infestation was 8.3%; in the past 5 years that number has not been above 2. Similarly the mean number of puparia per 100 stems was at the highest level ever observed in the survey--14.5; in the last 5 years that number has not been above 2. Of the fields surveyed 66% were infested with Hessian fly, as compared with 35% in 1977. Protective cover by snow was believed to have been a factor.

By July 14, infestations of WHEAT STEM MAGGOT (Meromyza americana) in NORTH DAKOTA ranged up to 18% and caused damage to wheat in the south-central district.

Cereals developing in WASHINGTON in the spring or early summer generally harbored no GREENBUG (Schizaphis graminum) and only trace populations of an APHID (Rhopalosiphum padi) and ENGLISH GRAIN APHID (Macrosiphum avenae). Exceptions were noted in central Washington on irrigated wheat and barley during flowering and early ripening, where all 3 species ranged from 20 to 400 per tiller. R. padi infested 100% of winter small grains in the fall, ranging from less than 1 to 200+ per 0.3 row m (row ft). S. graminum was present in all wheat-growing counties in eastern Washington and extensive spraying took place. Some insecticide failures were reported on dryland wheat in the 2-3 leaf stage. Significant parasite control by Lysiphlebus testaceipes (an aphidiid wasp) was observed in the Yakima Valley in October. S. graminum and R. padi populations were reduced to very light levels as mild temperatures in mid-October prolonged parasite activity.

Overwintering greenbug populations on small grains near Twin Falls, IDAHO, dropped to nearly zero in early spring and did not develop economic numbers in 1978. Fall population reached economic numbers in Latah, Nez Perce, Bonners, and Clearwater Counties in early planted fall wheat and fall barley fields. This is the most widespread problem we have had with this pest in northern Idaho. Greenbug occurred throughout southeastern Idaho all season, but in subeconomic numbers.

Only scattered greenbug infestations were reported statewide in small grains in NEW MEXICO in spring and fall, except in Eddy County where counts ranged from 300 to 500 aphids per 25 sweeps.

A few scattered heavy infestations of greenbug in OKLAHOMA were present in wheat in early January but cold weather during January and February reduced numbers to light levels in all areas. Moderate numbers were again present in a few areas by late March and heavy numbers (200-1,000 per 0.3 row m (row ft))

damaged wheat in some west-central and south-central counties during April. Greenbug had virtually disappeared by the middle of May. Fall activity was first reported in volunteer wheat in Jackson County the first week of October. During November heavy numbers (250-4,000 per 0.3 row m) damaged scattered fields of wheat in several west-central counties and in very isolated fields in the Texas Panhandle and major northwest counties.

Greenbug populations in NEBRASKA were generally light during 1978 with few economic infestations reported in wheat. The first documented reports of greenbug in the State in 1978 were on wheat in Lancaster, Gage, and Johnson Counties in the southeast district on May 2 when greenbug averaged less than 1 per 0.3 row m (row ft). The first greenbug parasitized by Lysiphlebus testaceipes (an aphidiid wasp) was observed in Johnson County on May 17. Greenbug increased slowly through May 25 when aphids averaged 31 and parasitized aphids averaged 12.5 per 0.3 row m (row ft) in a wheat field in Johnson County. Parasitism continued to increase until wheat fields surveyed in Gage County were virtually aphid free by June 14. A greenbug flight was observed in several areas of eastern Nebraska during the last week in July and the first week in August.

Greenbug averaged 20 per plant on volunteer wheat in Lancaster County on August 2. Parasitism of the greenbug by L. testaceipes averaged 5%.

ENGLISH GRAIN APHID (Macrosiphum avenae) first occurred in NORTH DAKOTA during the season with winged females and nymphs being detected the week of May 22 through 26 on rye in the southeast. By June 23, English grain aphid and Rhopalosiphum padi were evident in the southeast in trace numbers on small grains with a single field of hard red spring wheat [boot stage] having populations of 16 per 0.3 row m (row ft).

Damage was starting to show by June 30 in the east-central district of NEBRASKA with 23 fields surveyed in Traill County with infestations ranging from trace (less than 50 per 0.3 row m (row ft)) to very severe (300+ per 0.3 row m). A single field of wheat [mid to late boot] consisting of 64.7 ha (160 acres) had populations ranging from 223 up to 1,395 (averaged 739) per 0.3 row m and controls were applied. Populations in fields in the northeast (Nelson County) and southeast (Steele County) districts ranged from trace to threatening. By July 14, light to threatening populations occurred on small grains in the central district. Aphids on small grains did not appear to pose a serious threat in the State. Localized infestations with some controls applied did occur in the east-central district.

In MINNESOTA, English grain aphid did not appear in small grains until 2-3 weeks before harvest in mid-July. Counts averaged 50 per 100 sweeps. One 120-ha (297-acre) wheat field in Kittson County, where nymphs and adults averaged 85 per 30-cm (12-in row), was treated on July 12, at a cost of \$2,100. About 1,600 ha (4,000 acres) small grains were treated statewide at a cost of \$28,000.

Heavy fall populations of an APHID (Rhopalosiphum padi) developed on early planted winter wheat fields throughout IDAHO. R. padi and GREENBUG (Schizaphis graminum) (at a 20-80 ratio) numbered up to 200 per head of wheat in a Tippecanoe County, INDIANA, wheat field in mid-June. Smaller numbers were observed both on wheat and oats through the central districts.

The first 1978 ASTER LEAFHOPPER (Macrosteles fascifrons) migrants were found throughout southwestern and south-central WISCONSIN in mid-May, about a month later than the first migrants of 1977. Treatments of susceptible vegetable

crops were minimal because of the light number of migrants and the low rate of ASTER YELLOWS MYCOPLASMA infection. The heaviest leafhopper population was observed in Waushara County where 24 per 100 sweeps were found in oats.

CHINCH BUG (Blissus leucopterus leucopterus) in NEBRASKA was restricted to the southeast corner of the State by the range of the tall bunchgrasses, which are used for overwintering sites, and other environmental conditions. Populations are generally held in check by a fungal disease which requires a prolonged period of high humidity and warm temperatures. Several successive years of drought conditions in this area (roughly including Richardson, Pawnee, Gage, Jefferson, Nemaha, Johnson, Saline, Cass, Lancaster, and southern Saunders Counties) have prevented the fungus from keeping the population under control. Overwintering adult activity in small grains was first noted in 8 wheat fields in Lancaster, Gage, and Johnson Counties where adults averaged less than 1 per 0.3 row m (row ft) on May 2. Mating was underway in these fields by May 25.

A series of thunderstorms in Gage County, Nebraska, during late June temporarily produced conditions favorable for the development of a fungus disease Beauveria globulifera (white muscardine). This disease killed virtually all of the adults in a wheat field surveyed in northern Gage County on June 29, but apparently did not affect the nymphs. No other reports of significant fungus infection were received.

Moderate SAY STINK BUG (Chlorochroa sayi) infestations in Graham County, ARIZONA, caused controls to be applied on wheat and sorghum. Very little loss occurred due to excellent chemical control. Yields were down from 1977 level due to weather conditions.

RICE STINK BUG (Oebalus pugnax) adults were found in unusually heavy numbers (up to 92 per 10' sweeps) in certain oat and wheat fields in eastern ARKANSAS in late May. Population counts dropped markedly within a week.

WHEAT STEM SAWFLY (Cephus cinctus) adults were detected in NORTH DAKOTA in the west-central district by June 9. The annual survey of hard red spring wheat stubble fields, last conducted in 1975, was conducted in 4 of the 6 counties in the northwest district. Cut stems ranged up to 24% with cutting evident in 24% of the fields (total 49) surveyed.

BROWN WHEAT MITE (Petrobia latens) in OKLAHOMA was present in wheat in the Panhandle, northwest and west-central counties from mid-March to mid-April. Heavy infestations occurred in southern Beaver County but very few fields were treated due to extreme dry weather. Moderate numbers found in Custer County in mid-October were wiped out by rain by mid-November.

WINTER GRAIN MITE (Penthaleus major) in OKLAHOMA was present in wheat through mid-April. Heavy numbers and some damage were reported in Love, Carter, and Murray Counties in early January and in Garfield County in mid-March. Fall activity began at the end of November.

WHEAT CURL MITE (Eriophyes tulipae) - See WHEAT STREAK MOSAIC VIRUS above.

TURF, PASTURES, RANGELAND

INSECTS

BLUEGRASS BILLBUG (Sphenophorus parvulus) populations in IDAHO remained extremely serious, destroying lawns from Payette, Payette County to Boise, Ada County. Since this is a new pest, timing of applications are not yet synchronized with the life cycle of the insect until its damage has already been done.

Larvae of BRONZED CUTWORM (Nephelodes minians) in KENTUCKY damaged several bluegrass and some fescue lawns and pastures in the eastern area during May. Counts were much heavier than normal.

Spring populations of a GELECHIID MOTH (Chionodes psiloptera) in WASHINGTON were heavy in some areas of Whitman and Spokane Counties in bluegrass seed fields. By fall the populations decreased due to unfavorable weather and extensive treatment programs.

EUROPEAN CRANE FLY (Tipula paludosa) on turf in WASHINGTON increased greatly over 1977. It has been found from the Seattle area to the northern State border.

Some concern about GREENBUG (Schizaphis graminum) developed in OHIO as infestations are more frequently reported damaging lawns at Dayton, Montgomery County, and Columbus, Franklin County. Several lawns have been completely destroyed.

The major turf and pasture pest in MISSISSIPPI during the season was the CHINCH BUG (Blissus leucopterus leucopterus). Damaging numbers were first reported during mid-July and extended to late-August. Heaviest populations were confined to southern Mississippi. No increase was observed over 1977.

SOUTHERN CHINCH BUG (Blissus insularis) remained a major pest of St. Augustine-grass in FLORIDA although total losses may be decreasing because of the trend away from planting St. Augustinegrass and the increased use of the resistant variety 'Floratam'. A resistant strain of southern chinch bug continued to expand its range on St. Augustinegrass in Palm Beach and Broward Counties.

DIFFERENTIAL GRASSHOPPER (Melanoplus differentialis) averaged 10-20 per 0.8 sq m (sq yd) in northwestern ARKANSAS in bermuda and fescue pastures during mid-to late July. Grasshoppers in NORTH CAROLINA, mostly M. differentialis, were collected from Piedmont counties of Alamance, Orange, Durham, Guilford, Randolph, and Lincoln, July 11-13. Infestations of 10+ nymphs per 0.09 sq m (sq ft) were noted in fescue and coastal bermudagrass pastures or hay fields.

METRIC CONVERSION

1 cm = 0.393701 in
1 m = 3.28084 ft = 1.09361 yd
1 km = 0.621371 mi
1 sq cm = 0.155000 sq in
1 sq m = 10.7639 sq ft = 1.19599 sq yd
1 ha = 2.47104 acres
1 Sq km = 0.386101 sq mi
1 kg = 2.20462 lb
1 t (metric ton) = 1.10231 short ton
1 kg/ha = 0.892183 lb/acre
1 t/ha = 0.446091 ton/acre

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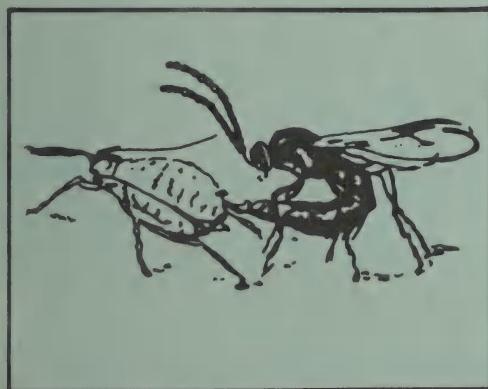
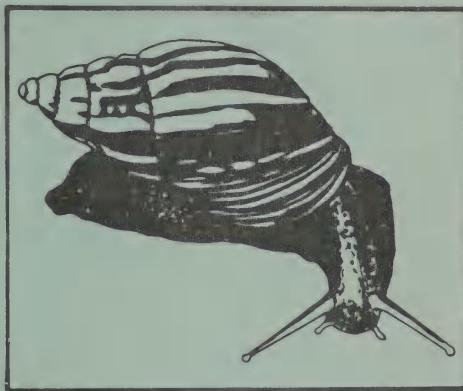
Service

Apr 13, 79

Vol. 4

No. 12

PROCUREMENT SECTION
CURRENT SERIAL RECORDS



This publication is distributed weekly to Federal and State agencies, universities, farmers, and others interested in containing or controlling pests in the United States.

Data included in this publication are compiled from reports submitted by cooperating State, Federal and other agricultural and industrial specialists. Accuracy of the reports is not verified prior to publication.

Cooperative Plant Pest Report supersedes *Cooperative Economic Insect Report*, which was discontinued with Volume 25, Numbers 49-52, 1975.

Correspondence should be directed to:

CPPR

New Pest Detection and Survey Staff
Plant Protection and Quarantine Programs
Animal and Plant Health Inspection Service
U.S. Department of Agriculture
Federal Building #1
Hyattsville, Maryland 20782

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COOPERATIVE PLANT PEST REPORT

HIGHLIGHTS

Current Conditions

SOIL-BORNE WHEAT MOSAIC obvious on wheat in parts of Kansas. (p. 152).

Treatments needed for ARMY CUTWORM on wheat in parts of north-central Oklahoma. (p. 152).

ALFALFA WEEVIL tip damage 50% or more on alfalfa in parts of western one-half of Tennessee. (p. 153).

Detection

For new county record see page 157.

Some First Occurrences of the Season

TAN SPOT, SPRING BLACK STEM, AND LEPTO LEAF SPOT in Kansas. ALFALFA WEEVIL larvae in Kansas, and egg laying and adults in Indiana. PEAR PSYLLA egg laying in New York. A MOSQUITO in Kansas. AMERICAN DOG TICK in Delaware. LADY BEETLES in Indiana.

Special Reports

Summary of Pest Conditions in the United States - 1978

Forage Legumes (p. 160-167).

Soybeans (p. 167-174).

Peanuts (p. 174).

Reports in this issue are for the week ending April 6 unless otherwise indicated.

CONTENTS

Corn, Sorghum, Sugarcane	
Diseases.....	151
Insects.....	151
Small Grains	
Diseases.....	151
Insects.....	152
Forage Legumes	
Diseases.....	153
Insects.....	153
Soybeans	
Insects.....	154
Peanuts	
Diseases.....	155
Beneficial Organisms and Their Enemies	
Insects.....	156
Federal and State Programs	
Insects.....	156
Hawaii Pest Report.....	157
Detection.....	157
Light Trap Collections.....	158
Pest Interceptions of Quarantine Significance at Ports of Entry.....	159
Summary of Pest Conditions in the United States - 1978	
Forage Legumes	
Diseases.....	160
Insects.....	160
Soybeans	
Diseases.....	167
Insects.....	169
Peanuts	
Insects.....	174

CORN, SORGHUM, SUGARCANE

DISEASES

NEMATODES - OKLAHOMA - District> County= populations of a LESION NEMATODE (Pratylenchus sp.), a STUNT NEMATODE (Tylenchorhynchus sp.), a DAGGER NEMATODE (Xiphinema sp.), and a PIN NEMATODE (Paratylenchus sp.) per 100 ml of soil, respectively, from samples in field intended for corn production: C> Canadian= 60, 112, 4, and 414. (K.E. Conway).

INSECTS

EUROPEAN CORN BORER (Ostrinia nubilalis) - KANSAS - District> County= live overwintered larvae per 25 plants in corn fields (f) by March 28, fields undisturbed since harvest: SW> Finney= 0-2 in 3f, Kearny= 0 in 2f, Grant= 0 in 1f, and Haskell= 1 in 1f. (M.L. Shuman). Current live larval counts from cornstalks: SC> Kiowa= 3 in 1f and 5 in 1f per 25 consecutive stalks, fields had been grazed, Edwards= 16 and 3 per 25 stalks in 2f, 1 field had been grazed; NE> Jefferson= 39 in 100 consecutive stalks from unharvested part of corn field and 5 in 100 stalks in harvested part. (B.D. Hilbert).

ILLINOIS - Area> overwintering survival of European corn borer: Southern one-half> 55% to nearly 100%. Percent survival inversely related to percent infected with Nosema pyraustae (an insect fungus), determined from 1978 fall generation corn borer survey. (K. Black). WISCONSIN - District> County= survival rate of overwintered larvae in dissected cornstalks in 2 fields: SW> Iowa= 62%. (O.L. Lovett).

SOUTHWESTERN CORN BORER (Diatraea grandiosella) - KANSAS - District> County= overwintered larvae per 25 consecutive cornstalks March 26-28: SW> Finney, Kearny, Grant, Haskell, and Stanton= none detected in 13 fields. All fields undisturbed since harvest except some had been grazed. (D.E. Mock, M.L. Shuman). Grant= very limited 1977 survey showed heavy overwintered larval survival in undisturbed corn field. (D.E. Mock). All stages of larval decomposition in recent surveys indicated some larvae died recently. (M.L. Shuman). Current live larvae from previously infested cornstalks in number of fields (f), fields undisturbed since harvest except for light grazing: SC> Kiowa= 2 in 25 stalks in 1f and 0 in 15 stalks in 1f and Edwards= 0 in 25 stalks in 1f and in 8 stalks in 1f. (G.A. Salsbury).

SMALL GRAINS

DISEASES

TAN SPOT (Pyrenophora trichostoma) - OKLAHOMA - District> County= infection on 'Osage' wheat: WC> Blaine= heavy. (K.E. Conway). KANSAS - First of season. District> County= prevalence on wheat in 1 field each, week of March 30: SC> Barber= 75% and Kingman= 2%. Currently in widely scattered fields. Prevalence on wheat [growth stage]: EC> Anderson= 1% [8 tiller] and SE> Neosho= 5% [6 tiller] and Labette= trace [3 tiller]. (T. Sim, IV).

SOIL-BORNE WHEAT MOSAIC VIRUS - KANSAS - Parts of central, south-central, and eastern areas: obvious on wheat [mostly tiller]. District> County= percent coverage on wheat week of March 30: SE> Greenwood= 5%; EC> Coffey= 2%, Lyon= trace to 1%, and Wabaunsee= trace to 25%; SC> Sumner= 10-70% [some beginning to joint] and Sedgwick= 50%; C> Saline= 50%, Dickinson= trace to 2%, and

Lincoln= soil-borne wheat mosaic virus trace; and NC> Mitchell= 1%, Clay= trace, and Ottawa= trace. Current percent coverage on wheat [growth stage]: EC> Anderson= 5% [8 tiller], Lyon= trace [6 tiller]; SE> Allen= trace to 1% [4-5 tiller], Neosho= trace to 5% [6 tiller], Cherokee= trace to 50% [4-8 tiller], Labette= trace to 20% [3-4 tiller], and Crawford= 5% [3-7 tiller]; and NE> Jackson= trace [4 tiller] and Pottawatomie= 5-10% [4 tiller]. (T. Sim, IV).

WHEAT STREAK MOSAIC VIRUS - See WHEAT CURL MITE (Eriophyes tulipae) below.

INSECTS

ARMY CUTWORM (Euxoa auxiliaris) - OKLAHOMA - District> County= larvae per 0.09 sq m of wheat: Panhandle> Ellis= averaged 5 in many areas, and Harper= 1-7, fields untreated; NC> Woodward= 8 in some areas, some fields treated; Alfalfa, Major, Grant, Garfield, Kay, and Noble= 0-10, treatment needed in about 10% of fields; C> Payne= 1-2 in 1 field in Perkins area, and Kingfisher= 4 in 1 field. (D.C. Arnold).

KANSAS - No significant army cutworm damage in wheat surveyed. Moisture saturation of topsoil 70-100%, usually 100%. District> County= larval averages per 0.3 row m on field margins and in field, larval length, number of fields (f) surveyed, and average plants per 0.3 row m, [average tillers per plant], March 26-29: SC> Pratt= 0-0.1 and 0-0.8, 6.4-19 mm, 4f, and 7-11 [3-11]; Barber= 0-1 and 0-0.1, 6.4-13 mm, 4f, and 10-17 [8-11]; Pawnee= 0 and 0 to trace, 0-19 mm, 4f, and 8-17 [5-9]; Sumner= 0-0.1 and 0-0.2, 6.4-13 mm, 5f, and 9-14 [8-9]; Kingman= 0-0.1 and 0-4.3, 6.4-25 mm, 4f, and 12-15 [5-14]; C> Rush= 0 and 0, -, 4f, and 7-14 [5-9]; Barton= 0-0.1 and 0, 6.4 mm, 4f, and 7-17 [4-9]; SW> Hodgeman= 0-2.5 and 0-2.1, 9.53 mm, 3f, and 6-8 [5]; WC> Ness= 0-0.2 and 0, 9.53 mm, 4f, and 5-15 [6-12]; Lane= 0-0.3 and 0-0.1, 9.53 mm, 2f, and 8-10 [10-12]; Scott= 0-0.1 and 0, 9.53 mm, 3f, and 7-12 [6-15]; Wichita= 0 and 0, -, 3f, and 4-9 [4-12]; and Greeley= 0 and 0, -, 3f, and 9-10 [12-14]. (G.A. Salsbury, M.L. Shuman).

GREENBUG (Schizaphis graminum) - KANSAS - District> County= counts in 27 wheat [3-8 tiller] fields: SE> Cherokee, Labette, Neosho, Crawford, Wilson, Elk, and Greenwood, EC> Lyon and Anderson= 0 (S.C. White); NE> Leavenworth= 0 [5 tiller] (B.D. Hilbert).

CHINCH BUG (Blissus leucopterus leucopterus) - KANSAS - No movement from over-wintering sites. District> County= counts in 27 wheat fields: SE> Cherokee, Labette, Neosho, Crawford, Wilson, Elk, and Greenwood, EC> Lyon and Anderson= 0. (S.C. White).

WHEAT CURL MITE (Eriophyes tulipae) - KANSAS - Vector of WHEAT STREAK MOSAIC VIRUS found in volunteer wheat. District> County= number of fields checked, number of fields with mites, and degree of infestation: SC> Edwards and Pratt= 1, 1, and light, Comanche= 2, 0, and -, and Kiowa= 4, 2, and light in 1 field and heavy in 1 field. (T. Sim, IV).

WINTER GRAIN MITE (Penthaleus major) - KANSAS - District> County= averages per 0.3 row m in wheat [growth stage] field March 27-28: SC> Pawnee= about 100 [9 tiller] and Kingman= 20 [14 tiller]. (G.A. Salsbury).

FORAGE LEGUMES

DISEASES

SPRING BLACK STEM (*Phoma medicaginis*) - OKLAHOMA - District> County= infection on samples of alfalfa: C> Payne= heavy in research plot. (K.E. Conway). KANSAS - First of season. District> County= prevalence on alfalfa week of March 30: SC> Sumner= 90% in 1 field. Week ending April 6: Prevalence increased and no defoliation observed. District> County= prevalence/severity on alfalfa [growth stage]: SE> Wilson= 80%/light [13 cm], Crawford= -/- [11 cm], Labette= -/- [10 cm], Elk= -/- [13-17 cm], and Montgomery= -/- [14 cm]. (T. Sim, IV).

LEPTO LEAF SPOT (*Leptosphaerulina briosiana*) - KANSAS - First of season. District> County= prevalence on alfalfa field week of March 30: SE> Greenwood= trace in 1 field. Week of April 6: Prevalence increased and no defoliation observed. District> County [host stage]= prevalence 100%/severity light on alfalfa: SE> Wilson [13 cm], Crawford [11 cm], Labette [10 cm], Elk [13-17 cm], and Montgomery [14 cm]= 100%/light. (T. Sim, IV).

INSECTS

ALFALFA WEEVIL (*Hypera postica*) - OKLAHOMA - District> County= percent terminal infestations on alfalfa, larval and adult counts, and eggs per 0.09 sq m: SC> Stephens= 60-87%, adults 15-28 per 100 sweeps, and eggs 46-115 on March 28; Garvin= 5-52%, no data, and no data; C> Grady= averaged 30%, adults averaged 5 per 100 sweeps, and eggs averaged 17 on March 28; Payne= 3-5%, no data, and eggs averaged 29 on March 31; EC> Muskogee= no data, larvae averaged 1 per 10 sweeps, and no data; NC> Alfalfa= no data, occasional larva and adult, and no data. (D.C. Arnold).

KANSAS - First alfalfa weevil larvae of season. District> County= status on alfalfa [growth stage]: SE> Crawford= all 1st instars, averaged 0.06 per 100 stems [13 cm], adults 0 in 1 field; Montgomery= adults averaged 4 per 100 sweeps [15 cm], most heavily infested field in survey; and Elk= adults 0 in 3 fields [13-18 cm], and Labette= adults 0 in 1 field [10 cm]. (S.C. White). MISSOURI - Central and south-central areas> cool weather prevented alfalfa weevil activity; no larval or feeding damage in 5 forage legume fields. District> County= eggs per 0.09 sq m: NC> Grundy= 20. (J.L. Huggans).

TENNESSEE - District> County= percent alfalfa weevil damage on alfalfa on 50 tip samples unless stated otherwise: Central Basin> Williamson= 54%, Davidson= 50%, and Maury= 70% on 30 tip samples; Western Rim> Montgomery= 30%, Robertson= 43% on 30 tip samples, 8%, and 12%; West Tennessee> Hardeman= 50%, 10%, 30%, and 20%, Madison= 10% on 30 tip samples and 30%, and Fayette= 40% and 25%; and East Tennessee> Greene= 3% on 30 tip samples. (M. Cooper et al.). KENTUCKY - Reached economic thresholds in a few alfalfa fields [15-20 cm]. Controls recommended. District> County= larvae per 30 stems: Midwestern> Todd and Logan= 30-60 (mostly 2nd instar, possibly some 3rd instar). (M. Davidson, C.M. Christensen).

INDIANA - District> County= 1st instar alfalfa weevil larval infestation in alfalfa [averaged about 4 cm tall] March 28: SC> Harrison= 0-32%. First of season. District> adults in alfalfa field: SC> averaged 28 per 50 sweeps after dark April 1 and 2.75 per 25 sweeps in same field next morning; District> larval averages (mostly 1st instars in all areas) per infested stem, average percent infestation in number of alfalfa fields (f), and [average growth

stage]: SC> 2, 31% in 10f [7.8 cm]; SW> 1.3, 25% in 5f [7.4 cm]; and WC> 0.4, 2.4% in 5f [4.6 cm]. District> County= eggs per 60 sq cm in field: SC> Harrison= still about 400. (R.W. Meyer).

FLORIDA - Alfalfa weevil larvae decreased. District> County= counts per 100 sweeps of alfalfa: C> Alachua= larvae about 1,000 and adults 26 at Gainesville. Adult damage heavy to untreated alfalfa. (F.W. Mead). NORTH CAROLINA - Northern Piedmont District> Spot checks indicate controls applied in most of 5 alfalfa fields. County= larval status: Durham, Person, Orange, and Alamance= none observed. (T.N. Hunt).

EGYPTIAN ALFALFA WEEVIL (*Hypera brunneipennis*) - ARIZONA - District> County= larvae and adults per 100 sweeps of alfalfa: C> Maricopa= 13-600 and 2-160; C> Pinal= 85-1,117 and 172; and SW> Yuma= 60-100 and 0. (D. McCall et al.).

ARMY CUTWORM (*Euxoa auxiliaris*) - OKLAHOMA - District> County= counts per 0.09 sq m of established alfalfa: NC> Alfalfa, Major, Grant, Garfield, Kay, and Noble= 0-10, treatment needed in about 10% of fields, Major= heavy in 1 seedling field; Panhandle> Ellis= averaged 3; WC> Washita, Beckham, Custer; and C> Canadian= up to 3 in 10 fields. (D.C. Arnold).

KANSAS - No significant army cutworm damage in established alfalfa surveyed. Moisture saturation of topsoil 70-100%, usually 100%. District> County= larval averages per 0.09 sq m, larval length, and number of fields surveyed [average plant height], March 26-28: SC> Barber= 0-2, 6.4-13 mm, and 3 [3-5 cm]; Pawnee= 0 to trace, no data, and 3 [1-3 cm]; Edwards= 0, no data, and 1 [1 cm]; Sumner= 0-1, 6.4-13 mm, and 2 [5-8 cm]; Kingman= 1, 6.4-19 mm, and 2 [5-8 cm]; C> Rush= 0, no data, and 1 [3 cm]; and Barton= 0, no data, and 2 [3 cm]. (G.A. Salsbury).

PEA APHID (*Acyrthosiphon pisum*) - ARIZONA - District> County= various stages per 100 sweeps of alfalfa: C> Maricopa= 40-2,600; C> Pinal= 2,140-3,700; and SW> Yuma= 4,000-20,000. (D. McCall et al.). OKLAHOMA - District> County= counts per 100 sweeps of alfalfa: C> Grady= averaged 15 and SC> Stephens= 1-3. (D.C. Arnold). INDIANA - District> County= average per sweep in alfalfa field: SW> Daviess= 2+. (R.W. Meyer).

BLUE ALFALFA APHID (*Acyrthosiphon kondoi*) - OREGON - New county record. County= apterae swept from flush new basal growth of Melilotus sp. (a sweet clover) along ditch bank: Deschutes= collected 5 km east of Sisters, September 27, 1978. Collected and determined by R.L. Penrose. (R.L. Penrose).

SPOTTED ALFALFA APHID (*Theroaphis maculata*) - KANSAS - District> County= average per 100 sweeps of alfalfa [15 cm]: SE> Montgomery= 4. (S.C. White).

TARNISHED PLANT BUG (*Lygus lineolaris*) - OKLAHOMA - District> County= average per 10 sweeps of alfalfa: EC> Muskogee= 2. (D.C. Arnold).

SOYBEANS

INSECTS

GRAPE COLASPIS (*Colaspis brunnea*) - ARKANSAS - District> County= larvae per 500 cc soil core sample in soybean stubble field: EC> Monroe= heavy, 1+ at 3 different soil levels, concentrated at depth about 15-20 cm in field. (M.A. Mayse).

PEANUTS

DISEASES

A LESION NEMATODE (Pratylenchus sp.) - OKLAHOMA - District> County= counts per 100 ml of soil in 2 soil samples of peanuts: EC> Hughes= moderate, 20-52. (K.E. Conway).

SUGAR BEETS

INSECTS

GREEN PEACH APHID (Myzus persicae) - ARIZONA - District> County= adults and immatures on sugar beets: C> Maricopa= 80 per 3.7 row m and Pinal= 10-804 per 100 sweeps. (L.G. Blackledge).

COLE CROPS

INSECTS

CABBAGE LOOPER (Trichoplusia ni) - FLORIDA - Populations building up. District> County= status on cabbage: C> St. Johns= larvae small in Hastings area. Heavy, damaging populations expected within 3-4 weeks. (F.W. Mead).

DIAMONDBACK MOTH (Plutella xylostella) - FLORIDA - District> County= populations on cabbage: C> St. Johns= still heavy at Hastings, all untreated heads damaged. (F.W. Mead).

DECIDUOUS FRUITS AND NUTS

INSECTS

A NOCTUID MOTH (Orthosia hibisci) - NEW YORK - District> County= adults in pheromone traps March 30 to April 5: SE> Ulster= 4-21 per station. (Weires).

PEAR PSYLLA (Psylla pyricola) - NEW YORK - First egg laying of season. District> County= laid on pears: SE> Ulster= noted March 29 and W> Ontario= noted March 30. (Weires, Leeper).

SMALL FRUITS

INSECTS

A CERAMBYCID BEETLE (Xylocrius agassizi) - OREGON - County= adult status on 6 caged commercial gooseberry plants: PoTk= 4 from 2 plants; overwintered adults began emerging from roots at Eola Hills area. Several adults and mating pairs noted. (R.L. Penrose, D. Myers).

TWOSPOTTED SPIDER MITE (Tetranychus urticae) - WASHINGTON - District> County= overwintering females per strawberry leaf: W> Clark and Pierce= 50+. (A. Antonelli, C. Shanks).

MAN AND ANIMALS

INSECTS

A MOSQUITO (*Culiseta inornata*) - KANSAS - First of season. District> County= overwintered adult females in blacklight trap: NE> Riley= light at Manhattan. (K.O. Bell, Jr.).

AMERICAN DOG TICK (*Dermacentor variabilis*) - DELAWARE - First of season. District> County= Status: N> New Castle= reported in homes and on pets. (P.P. Burbutis).

BENEFICIAL ORGANISMS & THEIR ENEMIES

INSECTS

CONVERGENT LADY BEETLE (*Hippodamia convergens*) - OKLAHOMA - District> County= counts per 100 sweeps of alfalfa: SC> Stephens= 10-20 and C> Grady and NC> Alfalfa= averaged 5. (D.C. Arnold). INDIANA - First of season. District> County= specimen collected: SC> Washington= April 2. (R.W. Meyer).

LADY BEETLES - INDIANA - First of season. District> County= SC> Harrison= Coleomegilla maculata collected April 1 in alfalfa and SW> Warrick= Hippodamia parenthesis collected April 3. (R.W. Meyer).

AN ICHNEUMONID WASP (*Bathyplectes curculionis*) - OKLAHOMA - District> County= adults per 100 sweeps of alfalfa: SC> Stephens= 28-177 and C> Grady= averaged 22. (D.C. Arnold). FLORIDA - District> County= adult counts in 100 sweeps of alfalfa: C> Alachua= males 35 and females 2 at Gainesville. (F.W. Mead).

AN ICHNEUMONID WASP (*Bathyplectes anurus*) - KENTUCKY - District> County= status: Midwestern> Todd near Guthrie and Logan southeast of Russellville area= about 600 pupae per site released. (M. Davidson, C.M. Christensen).

FEDERAL AND STATE PROGRAMS

INSECTS

RANGE CATERPILLAR (*Hemileuca oliviae*) - OKLAHOMA - District> County= egg clusters per 91.4 m transect 0.9 m wide of rangeland: Panhandle> Cimarron= 20 in 1 known heavily infested section in southwestern area, none hatched. (D.C. Arnold).

RED IMPORTED FIRE ANT (*Solenopsis invicta*) - FLORIDA - District> County= mounds per ha: C> St. Johns= 124-185 mounds in bermudagrass pasture of about 40 ha near Hastings. Mounds appear several years old. (F.W. Mead).

SCREWWORM (*Cochliomyia hominivorax*) - No cases reported from continental United States March 11-17. Total of 43 cases reported in Mexico south of Barrier Zone February 25 to March 3. Number of sterile flies released March 11-17 totaled 46,246,640 as follows: Texas 26,571,840; New Mexico 3,920,000; Arizona 15,754,800. Total of 83,586,760 sterile flies released within Barrier of Mexico. (J.E. Novy, M.E. Meadows).

HAWAII PEST REPORT

Turf and Pasture - ARMYWORM (Pseudaletia unipuncta) moderate to heavy and scattered during mid-March on about 8 ha of kikuyugrass at Waikii, Hawaii Island, at 1,220-m elevation. Larvae up to 302 per 0.09 sq m. Apanteles militaris (a braconid wasp) and Eucelatoria armigera (a tachinid fly) noticeable amid armyworm infestations. Both parasites have been effective in controlling armyworm outbreaks in the past. (E.R. Yoshioka).

DETECTION

NEW COUNTY RECORD

INSECTS

BLUE ALFALFA APHID (Acyrrthosiphon kondoi) - OREGON - Deschutes. (p. 154).

LIGHT TRAP COLLECTIONS

Pest Interceptions of Quarantine Significance at Ports of Entry

Plant Importation and Technical Support Staff
Plant Protection and Quarantine Programs, USDA

<u>Life Stage</u>	<u>Host</u>	<u>Probable Origin</u>	<u>Port of Entry</u>	<u>Desti-nation</u>
adult	on stems of <u>Philodendron</u> plants from cargo	Colombia	Miami	FL
adult	on leaves of <u>Chrysanthemum</u> from cargo	Colombia	Miami	FL
adult	in quince from baggage	Peru	Miami	FL
adult	on coconuts from baggage	Barbados (?)	Boston	NY
adult	in Dunnage	Europe	Baltimore	--
adult	in Sesbania cut flowers from baggage	Hawaii	Honolulu	CA
larval	in seeds of <u>Cedrus</u> from cargo	Turkey	Hoboken	CA
adult	on stems of <u>Aglaozema</u> plants from cargo	Jamaica	Miami	FL

SUMMARY OF PEST CONDITIONS IN THE UNITED STATES - 1978

(Continued from page 148)

FORAGE LEGUMES

Highlights

Late heavy populations of ALFALFA WEEVIL in southwestern and south-central Idaho caused problems in hay and seed alfalfa. This pest poses a threat to alfalfa in southern and northeastern Iowa in 1979. Alfalfa acreage treated for this pest in Wisconsin increased eightfold over 1977's. Damage is expected to continue and spread in 1979. BEET ARMYWORM treatments were applied to 5% of the alfalfa acreage in Arizona and damage by this species and ALFALFA CATERPILLAR was the most severe in 20 years in New Mexico. POTATO LEAFHOPPER was economic on alfalfa from mid-June through August in Kentucky and Ohio; infestations increased again in Maryland.

DISEASES

The most serious diseases on alfalfa in KANSAS were SPRING BLACK STEM (*Phoma medicaginis*), LEPTO LEAF SPOT (*Leptosphaerulina briosiana*), and SUMMER BLACK STEM (*Cercospora zebrina*). All 3 diseases were statewide in distribution, but were most active in the eastern two-thirds of the State. COMMON LEAF SPOT (*Pseudopeziza medicaginis*) was more active in 1978 than in the previous 3 years. Prevalence of ALFALFA RUST (*Uromyces striatus* var. *medicaginis*) decreased from levels observed in 1977, but this rust became heavy in parts of central, north-central, and northeastern Kansas in the fall of 1978. Other foliar and stem diseases causing damage were ALFALFA DOWNTY MILDEW (*Peronospora trifoliorum*), ALFALFA BACTERIAL LEAF SPOT (*Xanthomonas alfalfae*), SOUTHERN ANTHRACNOSE (*Colletotrichum trifolii*), STEMPHYLIUM LEAF BLIGHT (*Stemphylium botryosum*), and YELLOW LEAF BLOTCH (*Pseudopeziza jonesii*). Estimated loss from all foliar and stem diseases was 16%, a decrease from 1977's estimates.

Losses from foliar and stem diseases on alfalfa in Kansas decreased in 1978 from the 1977 estimates. Disease activity was near normal for the first cutting and the second cutting until mid-June when disease incidence and severity decreased mostly due to hot dry weather. Disease activity remained low into the fall.

INSECTS

Distribution and severity of ALFALFA WEEVIL (*Hypera postica*) populations increased on forage legumes in Eddy, Chaves, and Dona Ana Counties, NEW MEXICO, during spring and early summer months.

Alfalfa weevil populations were much heavier in IDAHO than in 1977. Since the season was cooler than usual, damaging numbers did not occur until after the first growth was cut in the southwestern and south-central areas. This damage was unnoticed in many cases. This late population also caused problems in seed alfalfa where treatments could not be applied to control economic numbers of alfalfa weevil because of pollinators in the fields. In southeastern Idaho it was a pest on late first growth in spotted areas and subeconomic in the northern area.

Due to cold winter weather, very few alfalfa weevil larvae in OKLAHOMA hatched before the middle of March and heavy infestations were not present until the end of March. Peak infestations in alfalfa in the southern half of the State occurred during the first half of April and many fields were treated. Peak numbers were 1 or 2 weeks later in northern areas but very few heavy infestations of alfalfa weevil were reported from the northern half of the State. Larval activity continued through the end of May in some areas. Heavy adult damage to the second growth occurred in several central, south-central, and southwestern counties during the first half of May. First eggs of the fall were found in samples collected November 9 in Stephens County.

Alfalfa weevil populations on forage legumes were depleted in NEBRASKA in 1977 by Entomophthora phytonomi (an insect fungus disease). Apparently the weevils have not recovered as no significant infestations were reported in 1978. The peak larval infestation occurred in a field in Dawson County at 950 larvae per 100 sweeps on May 30. The first cutting was taken in that field before chemical control was needed.

By May 19 in NORTH DAKOTA, up to 40 alfalfa weevil adults per 100 sweeps were swept from alfalfa [10-25 cm (4-10 in) tall] in the northwest and west-central districts. Mating was evident. By June 9, 500 early instar larvae per 100 sweeps occurred on first growth, irrigated alfalfa [late bud to early bloom] in the west-central district with up to 100% of the tips showing damage. New county records were detected in Burke, Emmons, Kidder, Logan, McIntosh, Sheridan, and Renville Counties. See CPPR 3(40):571 and 4(9):93. Larvae in ARKANSAS (2nd to 4th instar) were found at moderate levels, 16-40 per 0.09 sq m (sq ft), in northwestern alfalfa fields in early April. Damage to plants continued to be light throughout the spring.

Reduced alfalfa weevil activity was observed for the second year in a row in southern IOWA. Adult weevils were observed in alfalfa fields during the last week in April. Initial egg hatch was noted May 10-13. Small larvae were present in some fields south of State Highway 2, but no economic damage was reported by May 25. Larval populations averaged 30 per 100 sweeps in Lee, Davis, and Ringgold Counties on June 6. While most economic losses in Iowa occur south of Interstate Highway 80, major outbreaks occurred in the northeastern area during 1978. Moderate to severe damage was reported first in 3 fields from Allamakee and Jackson Counties during the week ending June 16. Tip infestations ranged from 50% to 100%. Third and fourth instar larvae exceeded 30 per sweep. Additional reports of severe feeding damage were received from Clayton, Winneshiek, Fayette, and Dubuque Counties during the third week of June. Chemical treatments were applied. Larvae prevented the regrowth of alfalfa in Allamakee County during the last week in June. Stubble treatments were applied to several fields. Alfalfa weevil poses a potential threat in the southern half and northeastern areas of Iowa in 1979.

Alfalfa weevil larval feeding in MINNESOTA was first reported from Houston County on June 7 in alfalfa. By June 15, 4 more counties in the southeast district, Fillmore, Mower, Olmsted, and Wabasha, had trace numbers. By June 30, alfalfa weevil presence was reported in Dakota, Winona, Sibley, and for the first time in Chisago County. See CPPR 3(48-52):674. Populations did not reach economic levels in 1978. The addition of Chisago County brings the total infested counties in Minnesota to 51.

Alfalfa weevil egg hatch in ILLINOIS was first noted in alfalfa [10-15 cm (4-6 in) tall] in the southern one-fourth of the State during the first week of April. Because of cool, wet weather, damaging populations developed slowly. Only a few fields required treatment by the third week of April. Slight activity was observed as far north as U.S. Highway 36 by the last week of April. Populations reached economic levels in some southern fields by the first week of May but most of the affected fields were sufficiently advanced so that cutting was the preferred treatment.

Many growers in Illinois chose to spray stubble for alfalfa weevil in 1978 instead of spraying the standing alfalfa crop. Only a small percentage of fields treated in this way actually needed chemical application. By the second week of May, pupation had started in southern areas signaling the end of the weevil season. Occasional damaging infestations were still reported from fields in central and even northern areas as late as the first week of June, however, these fields were exceptions to the rule. About 24,000 ha (60,000 acres) of alfalfa were treated in 1978 as opposed to 89,000 ha (220,000 acres) treated in 1977, reflecting the relative importance of alfalfa weevil as a pest in 1978.

A large increase in the alfalfa acreage with damaging alfalfa weevil populations occurred in WISCONSIN in 1978. About 66,400 ha (164,000 acres) were treated with insecticides. The treated acreage was estimated to be an eightfold increase over that treated in 1977, the previous alltime high for control of this pest. About 300,000 ha (800,000 acres) had damaging infestations with most of the damage occurring in the counties along the shore of Lake Michigan and in the southern third of the State.

Adult alfalfa weevil populations of 3-30 per 10 sweeps in the spring in Wisconsin were the heaviest observed for several years. Larval feeding was first noted on alfalfa in Rock and Green Counties by mid-May and outbreak conditions existed in Dane, Iowa, and Sauk Counties by May 25. At this time, alfalfa fields had 4-80 larvae per sweep and 50-100% tip feeding. Door County was reporting heavy populations by June 1. Damaging infestations on the second growth were attributed to the extended hatching period and the very heavy numbers of larvae in the first growth. In some areas, damage to the second growth was confused with feeding of CLOVER ROOT CURCULIO (*Sitona hispidulus*) on the alfalfa crowns and the failure of the plants to recover normally after cutting because of insufficient carbohydrate reserves.

The outlook for 1979 in Wisconsin is for problems to continue in those alfalfa areas that experienced heavy populations in 1978 and for damaging populations to appear along the northern and western edges of the heavily infested areas in 1978.

Alfalfa weevil infestations developed around late March in TENNESSEE and many fields were at treatable levels by mid-April. A total of 10,298 ha (25,448 acres) of alfalfa was planted (in the 62 counties reporting), 7,539.7 ha (18,631 acres) of which required treatment, and 4,248.0 ha (10,497 acres) were actually treated.

Early spring alfalfa weevil egg counts in KENTUCKY were abnormally heavy, ranging from 100 to 400 per 0.09 sq m (sq ft) of forage legumes as compared to 10 per 0.09 sq m in the spring of 1977. However, the severe winter weather resulted in only about 40% of these eggs being viable. The first larvae of the season were observed in Todd County on March 28. Although a few days later than normal, larvae were still infesting the alfalfa very early in development due to the delayed spring. By the first week of April, larval populations were

reaching economic levels and chemical treatments were beginning to be applied to alfalfa fields for alfalfa weevil in southern Kentucky. Larval populations peaked in late April and early May with infestations of 5-10 larvae per alfalfa stem being very common. Damage appeared to be heaviest in central Kentucky and somewhat lighter in the western and northern regions. About 70% of the alfalfa acreage was treated at least once for alfalfa weevil larvae and 5-10% of the acreage received a second insecticide application.

Mild temperatures during September and October in Kentucky again allowed alfalfa weevil adults to lay at least moderate numbers of eggs. With favorable weather until spring, early infestations of alfalfa weevil larvae in 1979 are possible.

In December 1977 in INDIANA, alfalfa weevil egg counts per 15 sq cm (2.3 sq in) of alfalfa averaged about 10 in the northwest, 30 in the west-central and central, and 60 in southwest and south-central districts, roughly comparable to fall 1975 numbers. The fall 1975 numbers hatched into a real problem for alfalfa in 1976, but the winter of 1977-1978 appears to have been too much for the 1977 population, which was no problem in 1978. Spring egg laying began early in April (Harrison County) and reached 80 per 15 sq cm by April 17 when alfalfa averaged 20 cm (7.9 in) tall, with a 42% infestation rate and 2.1 larvae per stem. By mid-May, west-central area alfalfa averaging 35 cm (14 in) tall was only 25% infested with an average of 1.2 larvae per stem, central area alfalfa averaging 51 cm (20 in) tall was 50% infested with 1.3 larvae, southwestern and south-central area alfalfa averaging 52 cm (20 in) was 90% infested with an average of 4 larvae per stem and more than 1 egg per stem. About 50% of the alfalfa was treated south of U.S. Highway 50, where cutting was a viable alternative when planting of corn and rainfall permitted it. Treatment was generally not necessary between U.S. Highway 50 and U.S. Highway 30. North of U.S. Highway 30, about 30% of the fields suffered damage when a very warm period accelerated weevil development suddenly and growers were not able to harvest. Treatment was recommended at that point. Fall egg laying began by October 5 in Warren County in 1978. By December 4, egg populations of up to 75 per 15 sq cm had been counted in south-central area alfalfa fields, and up to 19 in northern districts.

The late cold, wet spring delayed development in severe populations of alfalfa weevil larvae in OHIO on forage legumes until May. Population levels peaked, as in 1977, during the third week of May. Peak counts during this period averaged far below average values from the previous season.

Alfalfa weevil populations were moderate on forage legumes in 1978 in SOUTH CAROLINA. Some untimely applications resulted in heavy damage.

On April 21 in VIRGINIA, 59% of the alfalfa tips was infested and the average estimated defoliation was 9.50% by the alfalfa weevil. In most fields, larvae were still too small, 3.18 mm (0.125 in) average length, to cause serious damage. One of the fields (17%) and 6% of the acreage exceeded the economic threshold (foliage loss of 20% or over). On April 28, 46% of the tips were infested and the average estimated defoliation was 8.92%. In most fields, larvae averaged less than 3.18 mm long. One of the fields (17%) and 32% of the acreage exceeded the economic threshold. By May 5, 56% of the tips was infested and the average estimated defoliation was 9.83%. One of the fields (8%) and 2% of the acreage exceeded the economic threshold. On May 12, 64% of the tips was infested and the average estimated defoliation was 4%. In most fields, larvae were still too small to cause serious damage. One of the fields (33%) and 5% of

the acreage exceeded the economic threshold. On May 19, 77% of the tips was infested by alfalfa weevil and the average estimated defoliation was 22%. All fields exceeded the economic threshold. Defoliation in Northumberland County averaged less than 10% on April 24. Weevil counts were light. By May 26, 45% of the tips was infested and the average estimated defoliation was 8%. One of the fields (25%) and 14% of the acreage exceeded the economic threshold. Overall damage was very light in 1978, probably due to the cool, wet spring.

First and second instars of alfalfa weevil appeared in MARYLAND on alfalfa [0.3 m (1 ft) tall] by April 21, which was 1.5 weeks behind the 1977 development schedule. Tip damage reached 30% in Caroline County. Overall levels in 1978 were slightly higher than the average levels of 1977. Seventy percent of the fields were treated in the central counties and 30% of fields treated in southern counties and the Eastern Shore. Overall yield loss statewide was concentrated on the first growth and was about 10% or 20,000 metric tons (20,000 tons).

Alfalfa weevil adults were light (1-9 per 20 sweeps of alfalfa) in central NEW YORK the week ending May 19. Light activity with development of early instars continued into the week ending May 26. As of June 2, 2nd and 3rd instars ranged 5-50 per 20 sweeps and tip damage ranged 5-30%. In general, alfalfa growth preceded weevil development and first growth exhibited limited damage. Hot weather in early June pushed population activity in the western area resulting in treatment of some fields, especially second growth stubble. Populations in the western area were pupating rapidly by the week ending June 16.

EGYPTIAN ALFALFA WEEVIL (*Hypera brunneipennis*) caused \$100,000 loss to the 83,365.5 ha (206,000 acres) grown for alfalfa in ARIZONA. Most of the losses occurred in Yuma, Maricopa, and Pinal Counties. Light counts of 10 per 100 sweeps were found in early September, but by late October counts of 3-4 per sweep were found.

Fall survey for detection of ALFALFA SNOUT BEETLE (*Otiorhynchus ligustici*) larvae on alfalfa in NEW YORK was conducted in Wayne, Cayuga, Oswego, Onondaga, Jefferson, Lewis, and St. Lawrence Counties. No significant movement was detected outside of the known area of infestation. Sampling of 25 infested fields showed an average of about 2 larvae per plant, but these sites were primarily fields having stands 4 years or older. One heavily infested first year alfalfa stand had 7 larvae per plant in the Wayne County infested area.

Controls for BEET ARMYWORM (*Spodoptera exigua*) were applied to 5% of 83,365.5 ha (206,000 acres) of alfalfa in ARIZONA. Little damage occurred due to excellent controls. Larvae, 2-6 per 100 sweeps, were present in January. A buildup began in early August and by mid-August, 4-5 larvae per sweep were present. Controls were applied and counts decreased in late August and early September. In mid-September, highs of 10-20 per sweep were present and controls again reduced counts. A buildup began in early October and by early December reached 3 larvae per sweep in some spots. The onset of cold weather decreased the population to a low level.

Beet armyworm and ALFALFA CATERPILLAR (*Colias eurytheme*) damage to alfalfa was more severe in NEW MEXICO than in the past 20 years. From July to September, beet armyworm counts were as heavy as 400-500 larvae per 10 sweeps of alfalfa fields from Dexter, Chaves County, to Carlsbad, Eddy County. The average was about 40 larvae per 10 sweeps. Damage was very noticeable in Dell City area, Otero County, in August.

ALFALFA LOOPER (Autographa californica) populations were very heavy throughout WASHINGTON. Infestations were reported from many forage crops in the eastern area. Populations in alfalfa and red clover seed fields were controlled by a viral disease. Pheromone trap catches from the northwestern area showed a peak population in late May and early June. Populations continued to be heavy into late September and early October, apparently the heaviest population since 1973. Populations in IDAHO developed heavy numbers on forage legumes early and were subeconomic except for the Fairfield area of Camas County where it did appreciable damage to some fields.

Although populations of ALFALFA BLOTH LEAFMINER (Agromyza frontella) in OHIO remained far below economic levels, these flies rapidly expanded their range into alfalfa-growing areas. It was first reported from Ashtabula and Trumbull Counties in 1977, and it apparently will spread to the west rapidly.

Alfalfa blotch leafminer adults in Centre County, PENNSYLVANIA, were first recorded on May 19, followed closely by eggs on May 26. Three distinct peaks in all stages were present, coinciding with the 3 alfalfa harvests normally taken. Moderately overlapping larval generations were present through October 31, as were adults. Eggs reached a peak on July 11 (second generation eggs about 1,000 per 0.09 sq m (sq ft)), on June 2 (440 per 0.09 sq m), August 17 (550 per 0.09 sq m), September 21 (280 per 0.09 sq m), and October 24 (90 per 0.09 sq m).

Alfalfa blotch leafminer adults in Pennsylvania peaked on July 5 (62 per 0.09 sq m (sq ft)), May 30 (5 per 0.09 sq m), August 14 (16 per 0.09 sq m), September 19 (9 per 0.09 sq m), and October 24 (2 per 0.09 sq m). Adults were sampled using a D-vac suction device during biweekly collections. Damage was heaviest before the second harvest, with an estimated 460 large blotched mines per 0.09 sq m (sq ft) (22.3% injury), twice the damage estimate during the first generation, and 3-times that of later generations.

Alfalfa blotch leafminer adults averaged 2-14 per 20 sweeps of forage and first pinholing in central NEW YORK occurred the week ending May 19. Population activity increased to 35-150 adults per 20 sweeps and pinholing was readily apparent by the week ending May 26. Blotch mines appeared the week ending June 2.

Cool wet weather in April in OREGON favored population buildups of BLUE ALFALFA APHID (Acyrthosiphon kondoi). The first confirmed damage to alfalfa occurred in Jackson and Josephine Counties during spring. In the Jacksonville and Central Point area very heavy populations, 100+ aphids per stem, were found in localized spots showing stunted, twisted and yellowed alfalfa plants. Controls were applied to several hundred acres. Some growers cut first growth early to avoid spraying. No buildups occurred on second and first growth. Counts remained light throughout central production areas. Blue alfalfa aphid is now known from 13 counties. New records for 1978 were: Harney, Grant, Morrow, Umatilla, Gilliam, Wheeler (CPPR 3(26):309, Josephine (CPPR 3(21):221, and Deschutes (See page 154 in this issue). Aphids were difficult to find in central and south-central alfalfa fields in September but were locally abundant on roadside yellow and white sweetclover in Deschutes, Crook, and Klamath Counties.

Blue alfalfa aphid adults and nymphs were found in high numbers in a 2-ha (5-acre) alfalfa field at Wishram, Klickitat County, WASHINGTON. This was a new State record. See CPPR 3(42):591.

Blue alfalfa aphid in OKLAHOMA was collected from alfalfa from April 6 to May 23. New county records were established for 16 counties. See CPPR 3(16):154;

3(17):163; 3(20):203; 3(22):237; and 3(40-41):571. Numbers of blue alfalfa aphid ranged 1-30 per 10 sweeps in most cases, 50 per 10 sweeps in 1 field in Grady County, and 200 per 10 sweeps in 1 field in Payne County.

PEA APHID (*Acyrthosiphon pisum*) populations developed on forage legumes early in southeastern IDAHO and then decreased to subeconomic numbers as in the southwestern and south-central areas.

Pea aphid and SPOTTED ALFALFA APHID (*Therioaphis maculata*) populations averaged over 50 aphids per forage plant [8 cm (3 in) tall] in Artesia area, Eddy County, NEW MEXICO, during February and March. Growth of plants was reduced due to these pests. Heavy damage continued through spring and early summer. Pea aphid in OKLAHOMA was present in alfalfa from mid-March to the end of June. Heavy infestations (500-1,000 per 10 sweeps) were common in the south-central, west-central, and southwestern counties about the middle of April and in a few other areas in late April and May. The first pea aphid nymphs were found in alfalfa the week of April 28 in Dane and La Crosse Counties, WISCONSIN. The first winged aphids were observed in Crawford County on May 17.

Spotted alfalfa aphid infestations in OKLAHOMA were reported in alfalfa from April to June and September to December. Only a few scattered heavy infestations were reported in any area during many months of hot and/or dry weather. In NORTH DAKOTA wingless adults and nymphs were detected at the rate of 100 per 100 sweeps on May 19 on alfalfa [10 cm (4 in) tall] in the northwest and west-central districts.

First instar nymphs of MEADOW SPITTLEBUG (*Philaenus spumarius*) first appeared in INDIANA in several forage legume fields in Harrison County, April 11. The nymphs consisted of 23% 2nd instar by April 21. First instar nymphs were collected April 20 in Shelby County and April 24 in Tippecanoe County.

The first POTATO LEAFHOPPER (*Empoasca fabae*) adult in ILLINOIS was collected in forage legumes in Washington County during the second week of April. By the first week of May in Mason County, occasional adults were taken in sweep samples. Adults increased to 10-40 per 100 sweeps by the third week of May in many fields, followed by nymphs in samples from Jersey County. Populations remained relatively light until about the second week of June when many alfalfa fields in the west and northwest districts had adult populations of 1+ per sweep.

One Henry County field averaged 2 potato leafhoppers per sweep and damage was visible. By the last week of June, infestations of 2+ adults per sweep were common with 5 per sweep taken in a Lawrence County alfalfa field. Populations remained heavy through July. "Hopperburn" in infested fields was consistently more pronounced in areas suffering from moisture stress. Overall damage or losses are difficult to assess. Many fields that should have been treated were not. About 12,000 ha (30,000 acres) were treated statewide.

The first potato leafhopper migrant in WISCONSIN was swept from alfalfa in Iowa County May 17. Populations up to 1 per sweep were taken in many areas with very little injury in 1978. First adults of the season in KENTUCKY were found in a Fayette County alfalfa field May 22. Populations were beginning to reach economic levels by mid-June. During July populations became very heavy in some fields and "hopperburn" was very evident. Problems continued into August; about 2% of the alfalfa acreage received treatment. Probably most of the alfalfa in INDIANA needed treatment once during the year, as early as the first growth and

as late as the fourth growth. For about 200,000 ha (400,000 acres) at \$6 per 0.4 ha (acre) control costs of potato leafhopper could have risen to \$2,400,000. Losses due to lack of controls were more difficult to assess.

Very heavy numbers of potato leafhopper in OHIO (up to 16.5 adults per sweep in 1 alfalfa field) were reported in 1978 and populations remained above the economic threshold of 1 per sweep from mid-June through August. Intermittent wet weather at regular intervals over much of the State reduced the threat of injury to alfalfa except in isolated fields. Potato leafhopper continued the trend of the past 4 years on alfalfa in MARYLAND by increasing 10% over 1977. First economic infestation occurred in mid-June in Montgomery and Washington Counties (1+ per sweep) on alfalfa [15-30 cm (6-12 in) tall] with yellowing in some fields. About 85% of the acreage statewide or 23,472 ha (58,000 acres) received treatment with yield loss at about 10% or 1,814.37 metric tons (20,000 short tons).

Potato leafhopper in NEW YORK was scarce in forage throughout the western and central areas on June 13-14. Populations were heavy on new seedings in the southwestern area the week ending July 8. Populations affected regrowth in the western area week ending July 15, and significant damage to second growth was reported in Wayne County. The situation was complicated by dry weather.

Populations of LYGUS BUGS, mostly Lygus hesperus and PALE LEGUME BUG (Lygus elisus), in IDAHO averaged above 1977 counts on forage legumes. At least 2 sprays were used on the average.

GRASSHOPPER, Melanoplus femur-rubrum and Melanoplus bivittatus, populations in OHIO were the heaviest in several seasons. Per sweep values of 8.9, 3.8, and 1.3 were collected in late July and August in alfalfa.

SOYBEANS

Highlights

1978 was the worst in 24 years for PHYTOPHTHORA ROT on soybeans in Ohio. SOYBEAN BROWN SPOT was widespread in Iowa and Ohio. CHARCOAL ROT caused 10% loss, the most damaging disease on soybeans in Kansas. BACTERIAL TAN SPOT is a new disease for Iowa. SOYBEAN MOSAIC VIRUS was the major pathogen on soybeans in Missouri. An unknown viral disease was detected for the first time in Michigan.

DISEASES

PHYTOPHTHORA ROT (Phytophthora megasperma var. sojae) in KANSAS was more widespread on soybeans in 1978 than in 1977, as reported from all districts, except the southwest, west-central, and northwest. The disease was most prevalent in the east central district. Prevalences were seldom greater than 2%. In the southeast district, prevalence as high as 60% was reported in the spring. No new races were reported in 1978. The races currently known in Kansas are 1, 3, 4, 5, 6, and 9. A PYTHIUM DAMPING-OFF (Pythium debaryanum) was found in conjunction with Phytophthora rot in a few fields in the central and east-central districts. Estimated loss was 1%.

Phytophthora rot was the most destructive disease in OHIO on soybeans in 1978. This disease was present in the northern and northwestern regions in almost every field. A survey revealed that about 600,000 ha (1.5 million acres) of soybeans were affected with an average yield loss of 10%. The survey was limited to that portion of the State north of U.S. Highway 36 which is roughly the delimiting line for high prevalence. Individual field losses ranged from a few plants in some fields to 100% in others. Since surveys began in 1954 for this disease, 1978 is the single worst year.

SOYBEAN DOWNTY MILDEW (Peronospora manshurica) was commonly found on soybeans in KANSAS. Infestations were reported from widely scattered fields in the north-east and east-central districts. In OHIO, this was one of the most widespread diseases on soybeans for 1978. Prevalence was 100% in all 27 counties surveyed throughout the soybean-growing regions. Infections did not become severe enough to cause defoliation. In MICHIGAN, more commercial soybean fields were infected in 1978 than in 1977. Severity was 60% on 90% of the plants in some counties. The exact yield loss potential has not been determined; severe defoliation was caused in some fields. The effect of defoliation in soybeans can cause reduction in yield up to 80%. 1/

SOYBEAN BROWN SPOT (Septoria glycines) was commonly found on soybeans in the east-central district of KANSAS. In IOWA, this disease was prevalent on an average of 5 of 100 soybean plants at mid-season and on 99 out of every 100 plants by late August. A study during the 1978 growing season under semi-contracted conditions, showed that this disease was the most widespread, longest lasting leaf disease on soybeans in 1978, that defoliation in late season averaged 10-15% with exceptional fields showing 30-40% reductions, and that yield reduction as great as 17% is possible under favorable field conditions.

Soybean brown spot was the most widespread disease of soybeans in OHIO. Prevalence was 100% in all 27 counties surveyed throughout the growing regions. Severity reached 100% on the lower leaves on the lower one-third of the plant and only occurred on the upper leaves after a week of wet weather late in the season.

CHARCOAL ROT (Macrophomina phaseolina) continued to be the most damaging disease on soybeans in KANSAS and caused about 10% loss compared with 2% in 1977 and 5% in 1976. Soybeans in all districts were affected except in the west-central and northwest where few soybeans are grown. The east-central district was most affected.

Prevalence of SOYBEAN STEM CANKER (Diaporthe phaseolorum var. caulivora) on soybeans in KANSAS in the east-central and central districts was 1% or less in 1978. SOYBEAN POD AND STEM BLIGHT (Diaporthe phaseolorum var. sojae) was trace on soybeans in the central and north-central districts of Kansas. Estimated loss from both diseases was 0.3%.

BACTERIAL PUSTULE (Xanthomonas phaseoli var. sojense) was commonly found on soybeans in KANSAS. It was the most widespread foliar disease, being reported from most counties in the eastern one-half of Kansas.

1/ Lockwood, J.L., J.A. Pecich, and J.N.C. Maduewesi. 1977. Effect of leaf removal simulating pathogen-induced defoliation on soybean yields. Plant Dis. Rep. 61:458-462.

SOYBEAN BACTERIAL BLIGHT (Pseudomonas glycinea) was commonly found on soybeans in KANSAS only in the north-central and northeast districts.

BACTERIAL TAN SPOT (Erwinia herbicola) is recorded as a new disease in IOWA in Boone, Hamilton, Hancock, Story, Greene, Guthrie, Pottawattamie, and Van Buren Counties. See CPPR 3(48-52):675.

SOYBEAN MOSAIC VIRUS in MISSOURI was the only major pathogen detected on soybeans in 1978. Prevalence of symptoms in mature plants was 40-80% in commercial fields. Soybean seed examined from disease monitoring plots revealed a uniformly high percentage of mottled seeds. Symptoms in KANSAS were observed in single soybean fields in the east-central district of Geary County and in the southeast district of Neosho County in 1978. Estimated loss from this disease and TOBACCO RINGSPOT VIRUS was 0.1%.

Prevalence of TOBACCO RINGSPOT VIRUS in Kansas which causes bud blight on soybeans was light in several adjacent counties in the north-central, central, and east-central districts. The infection pattern in the field suggested that infected seed was planted in that area. Bud blight was reported as very prevalent at one location in Cherokee County in southeastern Kansas. For estimated losses, see soybean mosaic virus for Kansas above.

An unknown viral disease caused by an unidentified LEGUME VIRUS was detected on soybeans for the first time in MICHIGAN in 1977. Studies were initiated in the winter of 1978 to identify the virus. The symptoms were reproduced in the greenhouse by inoculating the soybean cultivars, Harosoy 63 and Williams. Electron microscopic studies revealed a rod-shaped virus which induced pinwheels with laminated aggregations in the susceptible cultivars of soybeans. This virus systemically infected Phaseolus vulgaris (gardenbean) cv 'Top Crop' and 'Bountiful', and caused mild systemic symptoms in Vicia faba (broadbean), and Pisum sativum (garden pea) cv 'Miragreen' and mottling in cucumber (Cucumis sativus). The virus has been classified as a legume potyvirus on the basis of the shape of the virus particles, inclusion bodies, and host range. Further studies will be conducted in the winter of 1979 to pinpoint the identity of the causal agent.

In 1978, this virus was severe on Amsoy 71 and Harosoy 63 cultivars of soybeans in Michigan. The yield loss potential of this disease is unknown.

SOYBEAN CYST NEMATODE (Heterodera glycines) was recorded as a new State record in IOWA in Winnebago County. See CPPR 4(1):5. H. glycines was collected on soybeans in Faribault County, MINNESOTA, for a new State record. See CPPR 3(40-41):574.

INSECTS

CORN EARWORM (Heliothis zea) in OKLAHOMA damaged soybeans from mid-July to late September. Counts of 1-3 per 0.3 row m (row ft) were present in some areas in the east-central and southeastern counties during August and September but infestations were only light to moderate in other areas and in the northeastern and south-central counties.

Corn earworm populations were light on soybeans in most areas of SOUTH CAROLINA. Pesticide applications were needed in some fields and good control was achieved.

Frequent monitoring in NORTH CAROLINA of the corn earworm population in field corn July 15-25 indicated an average potential for damage in soybeans. Light traps indicated adult activity in Scotland and Robeson Counties began increasing July 21. By August 4, adults were laying eggs in soybean fields of the central and southern Coastal Plain. Larvae began appearing in soybeans August 4-11, but few fields had reached the threshold level. The threshold level was reached in scattered open canopy, blooming fields August 11-18. The average infestation observed in 30 open canopy fields in Scotland and Robeson Counties was 1.8 larvae per 0.3 row m (row ft). The threshold level in North Carolina is 2 larvae per 0.3 row m.

During peak corn earworm larval infestation August 15-25, 25% of the Coastal Plain fields in North Carolina which had open canopies and blooming during the adult flight, were at threshold. In 1977, the peak larval infestation was about 85% of all soybean acreage in the Coastal Plain and Piedmont. Piedmont infestations in 1978 were below the threshold level in 90% of the soybean fields.

Totals of 4, 6, and 8 corn earworm adults per night were taken a few days before August 12 at Painter, Accomack County, VIRGINIA. Adults were heavy enough to cause problems in highly susceptible crops such as sweet corn but soybean fields were relatively free of corn earworms. By August 25, adult collections peaked the nights of August 12, 13, and 14 with 50, 65, and 40 adults, respectively. After that, the collections at Painter averaged a steady 25-30 adults per night, definitely below the levels of 1977. Corn earworms in soybeans began to hatch in Westmoreland and Richmond Counties on August 31. Populations had not yet crossed the treatment threshold. A great deal of spraying was applied to soybeans this year. Corn earworm populations continued to be light as was earlier forecasted. Over 300 ha (800 acres) of soybeans were sprayed in Lancaster County although populations in scouted fields in the pest management program were very light. Other counties experienced the same trends. Corn earworm damage to soybeans was fairly light throughout much of the season. The prediction that populations would not be heavy in 1978 was supported by the activity. The numbers of corn earworm larvae were lighter than expected.

Corn earworm and TOBACCO BUDWORM (*H. virescens*) were first reported on soybeans in south delta counties, MISSISSIPPI, during the week of July 27 with numbers ranging from 0.3 to 3 per 3.0 row m (10 row ft). Peak numbers were observed during the week of September 14 on late soybeans. Up to 3 insecticide applications were applied in some southwestern areas, but in general populations were reduced compared to 1977.

H. zea and *H. virescens* larvae were unusually heavy on young pods in some east-central soybean fields in ARKANSAS as early as August 1. By September 1, up to 14 larvae per 0.3 row m (row ft) were reported in some southeastern fields, with infestations of 5 per 0.3 row m being common.

GREEN CLOVERWORM (*Plathypena scabra*) populations on soybeans in IOWA in 1978 were comparable to 1977 observations. Infestations were generally light to moderate. Initial capture of adults occurred during the second week of June. Populations in central Iowa ranged 5-7 per 0.3 row m (row ft) during the first weeks in July. Five 2nd and 3rd instar larvae per 0.3 row m were noted on soybeans [late vegetative to early bloom stage] in central Iowa on July 7. Counts ranged 1-11.5 per 0.3 row m. Adult flight generally subsided during the last 2 weeks in August.

Green cloverworm caused comparatively little damage in ILLINOIS in 1978. About 9,700 ha (24,000 acres) were treated in 1978, as opposed to 136,000 ha (337,000 acres) treated in 1977. The reason suspected for the decrease in green cloverworm is that natural controls built up in 1977, as in other years of heavy cloverworm populations, and suppressed the populations in 1978. Many mummified larvae were observed in soybean fields and large numbers of the parasite Chaetophlepsis plathypenae (a tachinid fly) were seen.

Green cloverworm larvae were first observed on soybeans in MISSISSIPPI during mid-June at low levels and showed a gradual increase in the State until the peak during late August. Damaging populations of up to 20 larvae per 0.3 row m (row ft) in the "hill sections" infested late beans with defoliation from 10% to 60%. Even with heavy populations in isolated areas a general decrease was observed compared to 1977.

By mid-July in KENTUCKY, second generation of green cloverworm was underway and larvae were beginning to be found in early planted soybeans. Damaging populations never developed in most fields. Larval populations peaked at an average of around 2 per meter (1 yd) in early to mid-August. Very few fields (less than 1%) required treatment.

Defoliating populations of VELVETBEAN CATERPILLAR (Anticarsia gemmatalis), SOYBEAN LOOPER (Pseudoplusia includens), and CABBAGE LOOPER (Trichoplusia ni) were in reduced populations in MISSISSIPPI compared to 1977. Loopers first appeared in light numbers in delta and "hill section" soybeans during mid-July with the peak in late August. Velvetbean caterpillar first appeared during mid-July in extreme southern counties and by September 7, populations had increased to economic levels. During 1978, velvetbean caterpillar was confined to the southern part of the State below Interstate Highway 20 for damaging numbers. This insect was very light above this line with occasional fields reporting problems. Velvetbean caterpillar adults were first captured in the State on April 21 in Stone County. This insect has been thought not to over-winter in Mississippi but this early capture may indicate possible adaptation to Mississippi weather.

Velvetbean caterpillar was the major pest of soybeans in FLORIDA during 1978. Essentially every 0.4 ha (acre) required at least 1 insecticidal application, with an average of 2.5-3.0 applications for the pest during the season. Maximum applications ranged 4-5. Because of the extreme drought situation from mid-July through October, conditions were not conducive to the development of epizootics of Nomuraea rileyi (an insect fungus). The natural control exerted by this pathogen on velvetbean caterpillar was almost nil.

YELLOWSTRIPED ARMYWORM (Spodoptera ornithogalli) larval infestations at around 2 per 0.3 row m (row ft) were found in several east-central soybean fields in early July in ARKANSAS. An average of 25-30% defoliation was observed.

SOUTHERN ARMYWORM (Spodoptera eridania) is a very uncommon pest in NORTH CAROLINA; however, infestations developed to damaging levels in the Washington, Hyde, Tyrrell County area. Pokeberry was a preferred host but soybeans were readily defoliated. Damage occurred during late September and was primarily concentrated on late soybeans. The extent of the infestation cannot accurately be estimated, but infestations occurred on several thousand acres of late beans in the area.

Damage to soybeans in MINNESOTA by DARKSIDED CUTWORM (*Euxoa messoria*) was reported from Chippewa, Renville, Murray, Freeborn, and Le Sueur Counties during the week of May 30 to June 2. By June 9, VARIEGATED CUTWORM (*Peridroma saucia*) infested soybeans in Fillmore, Mower, and Olmsted Counties. By June 16, one 8-ha (20-acre) soybean field was destroyed in Brown County by variegated cutworm. This field was replanted successfully using a carbamate bait. About 1% or 16,000 ha (40,000 acres) of the total 1.6 million ha (4.0 million acres) of soybeans were treated for cutworm control. Control costs at the rate of \$17.50 per hectare (2 acres) amounted to \$280,000.

Second to 4th instar larvae of EUROPEAN CORN BORER (*Ostrinia nubilalis*) infested 30-50% of soybean [2nd trifoliolate stage] plants in 6.1 ha (15 acres) of a 24-ha (60-acre) soybean field in Jasper County, ILLINOIS. Treatment was necessary.

SILVERSPOTTED SKIPPER (*Epargyreus clarus*) were the heaviest populations ever on soybeans on the Eastern Shore of MARYLAND. About 3% or 4,000 ha (10,000 acres) of Eastern Shore fields had some damage. Twenty percent economic defoliation levels were reached in lower Eastern Shore counties during the second week of September. About 300 ha (700 acres) were treated, the highest ever for the State.

MEXICAN BEAN BEETLE (*Epilachna varivestis*) adults and larvae were again a problem to soybeans in the northern region of KENTUCKY along the Ohio River. Heaviest populations occurred in late August with as many as 7 adults and 53 larvae per row meter (1 row yd) in a Trimble County field. Moderate to heavy defoliation occurred in a few fields. Since the problem was restricted to very localized areas along the Ohio River, an estimated 2% of the soybean acreage in the northern area was treated. In the entire State less than 1% was treated.

Few soybean fields in INDIANA needed treatment for MEXICAN BEAN BEETLE. Adults were observed within 18 km (11 miles) of the western State line on soybeans. The Wabash river basin has so far proven an effective barrier to their western movement. A conspicuous infestation in soybeans was observed in Miami County, the first such infestation in the northern districts. Infestations in soybeans have not persisted much north of Indianapolis.

Mexican bean beetle larval and adult leaf feeding combined with damage from JAPANESE BEETLE (*Popillia japonica*) and BEAN LEAF BEETLE (*Cerotoma trifurcata*) damage affected 100% of the soybean plants in south-central OHIO.

Mexican bean beetle adults averaged 250 per 0.4 ha (acre) in Chesapeake County, VIRGINIA, on June 12. Egg masses were present but larvae did not appear until June 22. By September 1, populations were building up in northern Westmoreland County. Parasites were not established in this part of the county and damage exceeded the threshold in many fields.

By September 15, Mexican bean beetle populations continued to be low in most areas on soybeans. A survey of counties in the southeastern extension district showed that only 7 of the 40 fields infested had measurable populations and that populations continued to be low in the Southern Coastal Plain. On October 6, populations continued to be very light. Westmoreland County was the only county in which significant damage was reported. An end-of-season survey showed that about 25% of the soybean fields in the southeast extension district were infested with subeconomic infestations. The remaining 75% of the fields had no detectable populations. Populations were lighter in 1978 than at anytime since the mid-1960's.

Mexican bean beetle adults first began appearing in MARYLAND on June 2 with egg laying on June 9, about 1 week later than normal. By the end of August, population levels were below normal statewide with only 1 field out of 350 in the pest management program needing treatment. However, populations increased rapidly in Caroline, Dorchester, and Talbot Counties during September with 5% 6,070.3 ha (15,000 acres) of the fields statewide receiving treatment. A parasite Pediobius foveolatus (a euphorid wasp) was at satisfactory levels in all areas where released. Yield loss in soybeans was estimated at less than 5% or 300,000 bushels. The use of systemics in soybean fields statewide decreased from 48% of the fields in 1977 to 25% in 1978, probably because of 2 consecutive dry years, the parasite release program, and confidence in the Maryland pest management scouting program. Overwintering populations in October and November were heavy in Eastern Shore counties especially Talbot, possibly indicating early high infestation levels for the spring of 1979.

Bean leaf beetle caused little damage to soybeans in many ILLINOIS areas by the first week of June. Twenty to thirty percent defoliation was observed in soybeans [third trifoliate stage] at this time in a Gallatin County field. Little further damage was reported. About the same amount of acreage was treated in 1978 as in 1977. Much of the acreage that was treated did not need treatment. Most of the economic infestations seemed to be in late-planted or double cropped soybeans.

GRAPE COLASPIST (Colaspis brunnea) caused unusually heavy larval damage to soybean roots were found in Phillips and Clay Counties, ARKANSAS, in late June.

Larval infestations of a CERAMBYCID BEETLE (Dectes texanus texanus) on soybeans in southeastern ARKANSAS reached 55% of the stems with live larvae during October, while east-central fields were generally below 5%. Even at the highest infestation levels, virtually no lodging was seen in any of the fields.

Adults of SEEDCORN MAGGOT (Hylemya platura) were taken in cone traps in Ontario County, NEW YORK, in late May. Peak activity was reached during the week ending June 26. Extensive damage to soybean plantings was observed in Seneca County the week ending June 17. The problem was aggravated by suboptimal germination conditions.

Adults and nymphs of POTATO LEAFHOPPER (Empoasca fabae) were unusually abundant in certain east-central soybean fields in ARKANSAS, causing chlorosis and some leaf curling; averages of 2 adults and 4 nymphs per trifoliolate leaf were observed in mid to late July.

In OKLAHOMA GREEN STINK BUG (Acrosternum hilare) was found in soybeans from mid-July to mid-October. Heaviest numbers occurred in mid and late September when 1-3 per 0.3 row m (row ft) were found in many fields in McCurtain County and scattered fields in the east-central area. Adults and nymphs in KENTUCKY damaged soybeans in a few scattered fields in late August and September; less than 1% of the soybean acreage received treatment.

The first report of GRASSHOPPERS (Melanoplus spp.) came from observations of nymphs in roadside ditches in Adair County, IOWA, on June 12. Some movement from ditches into soybean fields were occurred in Madison County by June 30. Initial subeconomic damage to soybeans was reported from Taylor County on July 3. Much damage caused by the small nymphs was noneconomic in July. Excessive rainfall in much of the southern area did not significantly reduce populations. Grasshoppers were present across several southern area soybean fields by July 17. Control attempts were generally unsuccessful.

Grasshoppers in TENNESSEE caused widespread damage to almost all field crops throughout the State. Controls were applied in many instances to soybeans.

Economic infestations of TWOSPOTTED SPIDER MITE (*Tetranychus urticae*) were reported from soybean fields in dry areas of ILLINOIS by the second week of July. Symptoms of mite damage were often confused with disease problems. An estimated 7,300 ha (18,000 acres) of soybeans were treated in 1978 compared to 20,234 ha (50,000 acres) treated in 1977. Some infestations escaped notice because they started in the centers of fields where adults were blown in. Soybeans were damaged in the drought stricken areas of the Purchase Region in KENTUCKY during late August and early September, about 2% of the soybeans were treated.

PEANUTS

INSECTS

CORN EARWORM (*Heliothis zea*) was again the predominant insect defoliator of peanuts in NORTH CAROLINA. Economic numbers occurred in scattered fields from Bladen and Sampson Counties in the south to Northampton and Halifax Counties in the north. This compares to 1977 infestation levels which warranted insecticidal applications on 50% of the 66,773.4 ha (165,000 acres).

A late summer generation of GRANULATE CUTWORM (*Feltia subterranea*) in OKLAHOMA heavily damaged pegs and young nuts of peanuts in Marshall County. Larvae ranged 10-15 per plant in some areas. Small larvae were found in mid-August and pupation was almost complete by the end of September.

LESSER CORNSTALK BORER (*Elasmopalpus lignosellus*) in OKLAHOMA was very common in peanuts in many areas in 1978. Infestations were first found in seedling peanuts in Marshall County in mid-June. By mid-July, counts ranged up to 50% and during August and September numbers ranged up to 95-100% in untreated fields. Peanut damage also ranged up to 100% in some areas. About 20% of the peanut acreage in SOUTH CAROLINA was infested and \$28,000 of insecticides were used for control with about 5% yield loss.

SOUTHERN CORN ROOTWORM (*Diabrotica undecimpunctata howardi*) infested about 13% of the peanut acreage in SOUTH CAROLINA with 5% yield loss and \$4,000 being spent for control.

METRIC CONVERSION

1 cm = 0.393701 in
1 m = 3.28084 ft = 1.09361 yd
1 km = 0.621371 mi
1 sq cm = 0.155000 sq in
1 sq m = 10.7639 sq ft = 1.19599 sq yd
1 ha = 2.47104 acres
1 sq km = 0.386101 sq mi
1 kg = 2.20462 lb
1 t (metric ton) = 1.10231 short ton
1 kg/ha = 0.892183 lb/acre
1 t/ha = 0.446091 ton/acre

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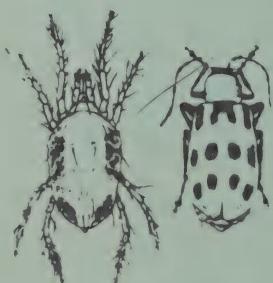
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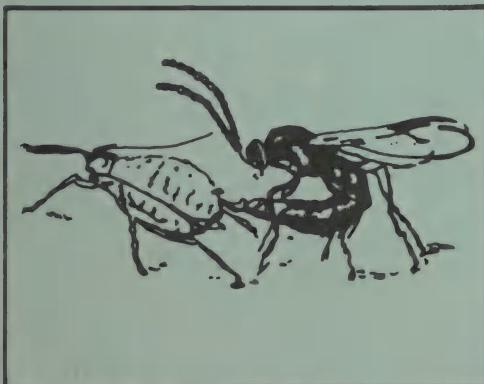
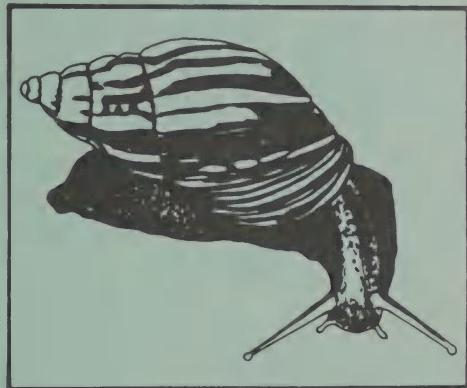
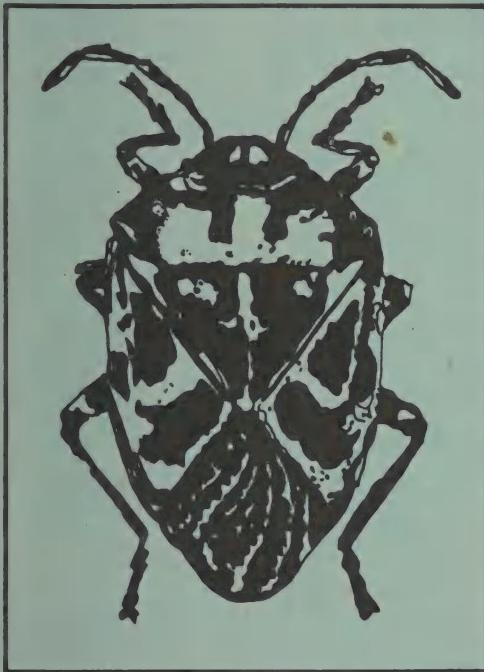
Cooperative PLANT PEST REPORT

Apr 20, 1979

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Animal
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Health
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Service

LAWRENCE, KANSAS



This publication is distributed weekly to Federal and State agencies, universities, farmers, and others interested in containing or controlling pests in the United States.

Data included in this publication are compiled from reports submitted by cooperating State, Federal and other agricultural and industrial specialists. Accuracy of the reports is not verified prior to publication.

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COOPERATIVE PLANT PEST REPORT**HIGHLIGHTS**Current Conditions

DRYLAND ROOT AND FOOT ROT reduced wheat stands 20-55% mostly in parts of eastern Nebraska. (p. 177).

First SPRING BLACK STEM defoliation on alfalfa in parts of south-central, east-central, and southeastern Kansas. (p. 179).

Prediction

First generation BLACK CUTWORM larvae expected soon in Ohio. (p. 177).

Detection

New county records on page 183.

Some First Occurrences of the Season

WHEAT STREAK MOSAIC, VARIEGATED CUTWORM eggs, and BLUE ALFALFA APHID in Kansas. IMPORTED CABBAGEWORM in Kentucky.

Special ReportsSummary of Pest Conditions in the United States - 1978

Cotton (p. 186-189).

Tobacco (p. 189-190).

Sugar Beets (p. 191).

Miscellaneous Field Crops (p. 191-193).

Estimated Losses from Rust in 1978. (p. 194-198).

Reports in this issue are for the week ending April 13 unless otherwise indicated.

CONTENTS

Corn, Sorghum, Sugarcane Insects.....	177	Cole Crops Insects.....	181
Small Grains Diseases.....	177	Deciduous Fruits and Nuts Insects.....	181
Insects.....	178	Forest and Shade Trees Insects.....	181
Forage Legumes Diseases.....	179	Man and Animals Insects.....	181
Insects.....	179		
Sugar Beets Insects.....	181		
Beneficial Organisms and Their Enemies Insects.....	182		
Federal and State Programs Insects.....	182		
Hawaii Pest Report.....	182		
Detection.....	183		
Corrections.....	183		
Light Trap Collections.....	184		
Pest Interceptions of Quarantine Significance at Ports of Entry.....	185		
Summary of Pest Conditions in the United States - 1978			
Cotton Diseases.....	186		
Insects.....	186		
Tobacco Diseases.....	189		
Insects.....	189		
Sugar Beets Diseases.....	191		
Insects.....	191		
Miscellaneous Field Crops Insects.....	191		
Estimated Losses from Rust in 1978.....	194		

CORN, SORGHUM, SUGARCANE

INSECTS

EUROPEAN CORN BORER (*Ostrinia nubilalis*) - KANSAS - District> County= live larvae in corn fields (f) undisturbed since harvest: SW> Stevens= 0 each in 50 plants in 2f, and Haskell= 1 in 50 plants in 1f (M.L. Shuman), and SC> Pratt= 8 in 25 stalks in 1f (G.A. Salsbury). ILLINOIS - Larval survival seems heaviest in northern and western areas where snow cover was deepest. Effects of Nosema pyraustae (corn borer protozoan) infection not expected to be evident until borers pupate in corn. District> County= average percent protozoan infection and average percent borer survival week ending April 6: NW> Whiteside= 5% and 89% and Ogle= 20% and 85%; NE> McHenry= 0% and 79% and La Salle= 26% and 76%; W> Adams= 100% and 72% and McDonough= 95% and 73%; C> Woodford= 70% and 83%; WSW> Sangamon= 85% and 55% and Madison= 95% and 63%; ESE> Clark= 80% and 71% and Jasper= 9% and 92%; SW> Jackson= 57% and 91% and Pulaski and Alexander= 30% and 100%; and SE> Wayne= 30% and 69% and Saline= 30% and 70%; statewide infection 52% and survival 78%. (K.D. Black).

WISCONSIN - European corn borer survival percentages relatively low compared to typical survival of about 90%. Heavier than normal dying specimens suggests possible disease among overwintered larvae. District> County= percent survival in dissected corn stubble (1 field unless stated otherwise): SC> Dane= 68% and Rock= 88%, SE> Walworth= 68% (2 fields), and SW> Sauk= 35%. (O.L. Lovett). OHIO - Still in overwintering stage. District> County= larval average per dead stalk in old corn field: SC> Adams= 0.06. (G.P. Walker).

SOUTHWESTERN CORN BORER (*Diatraea grandiosella*) - KANSAS - District> County= overwintered larvae in 100 cornstalks in fields (f) by April 6: SC> Pratt= 0 in 1f lightly grazed. (G.A. Salsbury). Current overwintered larvae in 50 infested stalks, fields undisturbed since harvest: SW> Stevens= 0 in 2f and Haskell= 0 in 1f. (M.L. Shuman).

BLACK CUTWORM (*Agrotis ipsilon*) - OHIO - First generation larvae expected soon. District> County= status on corn: NE> Wayne, NC> Ashland, and C> Knox and Licking= adults in pheromone traps and mating. (S. Clement, R. Schmidt).

A SCARAB (*Euphorbia sepulchralis*) - FLORIDA - Primarily a pollen feeder, adults also fed on sweet corn ear tips. District> County= acreage involved: S> Palm Beach= 120 to 160-ha commercial planting near Delray Beach. (W.G. Genung).

CHINCH BUG (*Blissus leucopterus* leucopterus) - KANSAS - District> County= overwintered adult average per 0.09 sq m of little bluestem: EC> Lyon= 2,185 for 50 samples at site bordering sorghum stubble field near Hartford. (G.E. Wilde).

SMALL GRAINS

DISEASES

DRYLAND ROOT AND FOOT ROT (*Helminthosporium sativum* and *Fusarium* spp.) - NEBRASKA - Most damage in patches. District> County= average (and range) percent stand reduction in wheat [tilling]: SE> Gage= 22% (trace to 66%), Johnson= 3% (trace to 8%), Pawnee= 9% (2-45%), Otoe= 15% (trace to 30%), Jefferson= trace, and Saline= 6% (4-9%); E> Lancaster= 10% (trace to 45%), Saunders= 20% (trace to 30%), Butler= 55% (7-90%), and Colfax= 40% (trace to 80%); C> Hall= 15%, Sherman= trace, Custer= 3%, and Dawson= 3%; S> Adams= 15%; and SW> Frontier= 3%, Red Willow= 0%, and Hayes= 30% (trace to 70%). (J. Watkins et al.).

TAN SPOT (Pyrenophora trichostoma) - KANSAS - District> County= prevalence/severity on wheat [host stage]: SC> Pratt= trace/- [tiller], Sumner= 1%/light [joint], Harper= 70%/light [tiller], and Comanche= 2-80%/light [joint]. (T. Sim, IV).

SOIL-BORNE WHEAT MOSAIC VIRUS - KANSAS - Cool weather caused symptoms to reappear. Still prevalent in central, south-central, and eastern areas. District> County= average percent of wheat fields [tiller] infected: SC> Summer= 25%, Sedgwick= 35%, Kiowa= 5%, Stafford= 5%, Edwards= 3%, Reno= 5%, and Harvey= 35%; C> Rice= 8%, Ellsworth= 3%, Saline= 15%, Marion= 20%, and Dickinson= 8%; EC> Geary= 5%; and SW> Ford= 5% and Gray= 20% in irrigated wheat in sandy hills of Arkansas River Valley. (T. Sim, IV).

WHEAT STREAK MOSAIC VIRUS - KANSAS - First symptoms of season. District> County= SW> Ford= in seeded and nearby volunteer wheat, and SC> Kiowa and Edwards= in volunteer wheat. (T. Sim, IV). See WHEAT CURL MITE (Eriophyes tulipae) below.

INSECTS

ARMY CUTWORM (Euxoa auxiliaris) - KANSAS - No infestation caused serious damage to wheat. District> County= populations in wheat: SW> Hamilton= this species, undetermined false wireworms, and PALE WESTERN CUTWORM (Agrotis orthogonia) seemed to have caused significant damage in few fields northeast of Syracuse where stands poor and plants small. Army cutworm up to 3 per 0.3 row m. (D.E. Mock). District> County= army cutworm larval averages per 0.3 row m in wheat [host stage] fields (f): WC> Wichita= 0-0.2 (larvae 2-4 cm long) [5-21 tiller] in 5f, SW> Hamilton= 0-0.2 [5-21 tiller] in 8f (M.L. Shuman); SC> Pratt, Sumner, Harper, Comanche, Sedgwick, Harvey, and Reno= none to trace [6-13 tiller] in 15f (G.A. Salsbury). NE> Nemaha and Marshall NC> Washington, Republic, Jewell, and Cloud, C> Saline and Dickinson, and EC> Geary= none [3-7 tiller] in 15f (B.D. Hilbert); C> Dickinson, Saline, Ellsworth, and Russell and NC> Clay, Ottawa, Cloud, Rooks, and Phillips= none to trace [3-15 tiller] in 1f each (K.O. Bell).

NEBRASKA - District> County= army cutworm larvae per 0.8 sq m of wheat: SW> Hitchcock= averaged 10+ in 1 field. (Campbell).

HESSIAN FLY (Mayetiola destructor) - KANSAS - District> County= eggs on volunteer wheat: SC> Kiowa= trace on leaves in 1 field April 11. (G.A. Salsbury).

CHINCH BUG (Blissus leucopterus leucopterus) - KANSAS - District> County= status: C> Dickinson and NC> Sedgwick= adults trace in 1 wheat field each, and Harvey= heavy and active but not flying (13°C April 12) in and around bunchgrass at 1 site. (G.A. Salsbury).

WHEAT CURL MITE (Eriophyes tulipae) - KANSAS - Vector of WHEAT STREAK MOSAIC VIRUS appears active in volunteer wheat in areas where virus a problem in 1978. Noted in 1 seeded wheat field adjacent to infested volunteer wheat. District> County= number of fields (f) checked with volunteer wheat and degree of mite infestation: SC> Reno= 3f, and moderate in 1f and heavy in 2f; Kiowa= 3f, and light in 1f and 0 in 2f; Sumner= 1f, and 0; and Pratt= 3f, and moderate in 1f, heavy in 1f, and 0 in 1f. (T. Sim, IV).

FORAGE LEGUMES

DISEASES

SPRING BLACK STEM (*Phoma medicaginis*) - KANSAS - First defoliation of season in south-central, east-central, and southeastern areas (indicated by asterisks). Still active on first growth alfalfa in eastern two-thirds of State. Cloudy, cool weather contributed to disease development. District> County= prevalence/severity on alfalfa [host stage]: NE> Pottawatomie= trace to 2% / light [5-8 cm]; NC> Republic= none [8 cm]; C> Saline= 40-60%/light [8-10 cm]; Dickinson= none [8-13 cm]; EC> Geary= none [10 cm], Lyon= 90%/light [10 cm], Douglas= 95%/light* [10 cm], Anderson= 100%/light* [13 cm], and Miami= 90% / light [10 cm]; SC> Pratt= 100%/light [10 cm]; Sumner= 100%/moderate* [17 cm]; SE> Elk= 100%/light [13-25 cm], Montgomery= 100%/light* [19 cm], Neosho= 100% / light* [15-18 cm], Crawford= 96%/light* [15 cm], and Wilson= 100%/light* [17 cm]. (T. Sim, IV).

LEPTO LEAF SPOT (*Leptosphaerulina briosiana*) - KANSAS - First defoliation of season in south-central, east-central, and southeastern areas (indicated by asterisks). Still active on first growth alfalfa in eastern two-thirds of State. Cloudy, cool weather contributed to disease development. District> County= prevalence/severity on alfalfa [host stage]: NE> Pottawatomie= trace to 10%/light [5-8 cm]; NC> Republic= 2%/light [8 cm]; C> Saline= 40-60%/light [8-10 cm], Dickinson= 10-25%/light [8-13 cm]; EC> Geary= 20%/light [10 cm], Lyon= 100%/light [10 cm], Douglas= 100%/light* [10 cm], Anderson= 100%/light* [13 cm], and Miami= 100%/light [10 cm]; SC> Pratt= none [10 cm] and Sumner= none [17 cm]; SE> Elk= 100%/light [13-25 cm], Montgomery= 100%/light* [19 cm], Neosho= 100%/light* [15-18 cm], Crawford= 94%/light* [15 cm], and Wilson= 100% / light* [17 cm]. (T. Sim, IV).

INSECTS

ALFALFA WEEVIL (*Hypera postica*) - NEW MEXICO - District> County= larval averages per 25 sweeps of alfalfa: SE> Eddy= 15-25 in 4 fields in Artesia area. (T. Riddle). **KANSAS** - Southeastern area> hatch continued in alfalfa, none as far north and west as Manhattan, Riley County. (K.O. Bell). District> County= major larval instars, averages per stem [average stem length], and percent tips damaged April 2-12: SE> Montgomery= 1st, 0.05 [15 cm], and 0% and 1st and 3rd, 0.29 [20 cm], and 10% (counts from 2 fields), Crawford= 1st, 0.06 [13 cm], and 6% and 1st and 2nd, 0.19 [15 cm], and 12% (counts from 2 fields); EC> Douglas= 1st, 0.05 [10 cm], and 4% and Anderson= 1st, 0.02 [13 cm], and 0%. Larvae swept from some alfalfa [10-25 cm tall] fields: EC> Miami and SE> Neosho and Elk= trace, usually none. Adults per 100 sweeps: SE> Elk= 8 and Wilson and Neosho= 1 each (S.C. White) and SC> Pratt= 1 in 1 field and Comanche= 0-3 in 3 fields (G.A. Salsbury).

KENTUCKY - Cool weather slowed alfalfa weevil larval development, little change from previous period. Larvae ranged 0-80 per 30 alfalfa stems. Southern area> populations were heaviest in alfalfa [15-20 cm tall]. Northern area> larvae began to reach stage where they could be shaken from alfalfa [10-25 cm tall]. District> County= larvae per 30 alfalfa stems [average stem length] and number of fields (f) scouted: Midwestern> Simpson= 10-62 [16-20 cm] and f number unknown, Logan= 7-80 [15-20 cm] and f number unknown, Henderson= 0.2 [11-16 cm] in 2f, Webster= 0-5 [10-15 cm] and f number unknown; C> Warren= 0-48 [18-20 cm] in 6f, Hardin= 0-5 [17-20 cm] in 6f, and Meade= 14-39 [14-15 cm] in 3f. (C.M. Christensen, P.E. Sloderbeck).

OHIO - District> County= alfalfa weevil adults per sweep of forage legumes [averaged 15 cm tall] and eggs: SC> Adams= 0.03 on mixed alfalfa and clover in 1 field, egg mass (15 eggs) on 1 of 23 stems and SW> Butler= 0.02 on alfalfa, egg masses (averaged 6 eggs) on 11% of stems. (G.P. Walker).

SOUTH CAROLINA - District> County= alfalfa weevil larvae per sweep of alfalfa: NW> Anderson= 20 in 11-ha field near Sandy Springs; damage moderate. (R.P. Griffin). NORTH CAROLINA - District> County= status on forage legumes: C> Chatham, Rowan, Iredell, and Northern Piedmont> Caswell= 3rd instar larvae noted, 100% of tips infested where controls not properly applied to about 10 fields. (C. Anderson, T.N. Hunt).

WEST VIRGINIA - District> County= percent of alfalfa tips infested by alfalfa weevil larvae [average plant height] and eggs per 0.09 sq m week ending April 6: E> Berkeley= 4% [12 cm] and 2, Jefferson= 6% [10 cm] and 8, Grant= 2% [11 cm] and 148, Pendleton= too light to count [7 cm] and averaged 15. (J.D. Hacker).

VIRGINIA - Alfalfa weevil fall and spring eggs hatching. Based on survey of 5 samples of 10 tips each, tip infestation 29% and average estimated defoliation 1%. Larvae too small (1.6 mm) to cause serious damage in most fields. District> County= hectares sampled, number infested per 50 tips, percent infestation, and percent defoliation: N> Culpeper= -, 9, 18%, and 1%; SW> Montgomery= 3 ha, 11, 22%, and 1%, and 2 ha, 21, 42%, and 1%, and 0.8 ha, 17, 34%, and 1% in 3 fields; and Pulaski= 3 ha, 15, 30%, and 1%, and 6 ha, 14, 28%, and 1% in 2 fields. (R.F. Heltzel, L.M. Los).

CLOVER LEAF WEEVIL (*Hypera punctata*) - KANSAS - District> County= larval averages on alfalfa: NE> Riley= 1st through 3rd instars 0.04 and 0.08 per stem in 2 fields [8-10 cm tall]; SE> Elk= trace, usually none; and EC> Douglas, Anderson, and Miami= usually trace. (S.C. White).

ARMY CUTWORM (*Euxoa auxiliaris*) - KANSAS - No infestations observed caused serious damage to alfalfa. District> County= larval (1-3 cm long) averages in alfalfa [seedling unless stated otherwise] in 1 field each: C> Saline= 4 per 0.09 sq m; NC> Cloud= 2.5 per 0.09 sq m, Rooks= 1 per 0.3 m, and Clay= none [5 cm tall]; populations in established alfalfa: C> Saline and NC> Osborne and Smith= none. (K.O. Bell).

VARIEGATED CUTWORM (*Peridroma saucia*) - KANSAS - First eggs of season. District> County= status on alfalfa: SE> Montgomery= 1 egg mass in 1 field April 9 (S.C. White); Kiowa in Haviland area and Sedgwick in Mt. Hope area= adults heavy in light traps. (K.O. Bell).

ALFALFA CATERPILLAR (*Colias eurytheme*) - NEW MEXICO - District> County= status on alfalfa: SE> Eddy= 1st instar larvae appeared in fields. (T. Riddle).

BLUE ALFALFA APHID (*Acyrthosiphon kondoi*) - KANSAS - First of season. District> County= average per 10 sweeps of alfalfa [18 cm tall] April 9: SE> Elk= 6. (S.C. White).

PEA APHID (*Acyrthosiphon pisum*) - NEW MEXICO - Populations decreased in majority of alfalfa fields. District> County= status on alfalfa: SE> Eddy= adults and nymphs averaged 20-25 per 25 sweeps in 4 fields in Artesia area (T. Riddle); 50-60% of aphids per 0.09 sq m parasitized by wasp in same area. (L. Gholson).

MEADOW SPITTLEBUG (*Philaenus spumarius*) - NEBRASKA - New county record. District> County= collection from alfalfa: E> Washington= 1 specimen near Blair, July 25, 1978, by D. Thielfoldt. Determined by G.R. Manglitz. (G.R. Manglitz).

TARNISHED PLANT BUG (*Lygus lineolaris*) - MISSISSIPPI - District> County= adult averages per 25 sweeps of red and crimson clover: EC> Chickasaw and Clay= 2.6. (R.E. Anderson).

SUGAR BEETS

INSECTS

SUGARBEET ROOT MAGGOT (*Tetanops myopaeformis*) - IDAHO - New county records. District> County= collection data on sugar beets: SW> Ada= south of Nampha, May 30, 1978. Payette= south of Fruitland and Washington= southeast of Weiser. Both collected May 31. All collected by P.M. Jolley and determined by G. Steyskal. (C.C. Blickenstaff, R.L. Stoltz).

COLE CROPS

INSECTS

IMPORTED CABBAGEWORM (*Pieris rapae*) - KENTUCKY - First of season. District> County= adults on cabbage: Bluegrass> Bourbon= flying on April 8 around freshly set plants at small truck farm. (J.C. Parr).

DECIDUOUS FRUITS AND NUTS

INSECTS

ROSY APPLE APHID (*Dysaphis plantaginea*) - DELAWARE - First adults of season. District> County= on apple: N> New Castle= common on apple [1 cm green stage] trees. (P.P. Burbutis).

FOREST AND SHADE TREES

INSECTS

NORTHERN PITCH TWIG MOTH (*Petrova albicapitana*) - WISCONSIN - District> County= larvae on jack pine: EC> Manitowoc= light to moderate, overwintered survival almost 70%; larvae about 4% parasitized. (O.L. Lovett).

MAN AND ANIMALS

INSECTS

A MOSQUITO (*Aedes atropalpus*) - KENTUCKY - New county record. District> County= larvae from abandoned tires: C> Jefferson= collected at Louisville, July 27, 1978, by A.J. Brownell. Determined by C.V. Covell, Jr. (C.V. Covell).

BENEFICIAL ORGANISMS & THEIR ENEMIES

INSECTS

CINNABAR MOTH (*Tyria jacobaeae*) - OREGON - First adult of season. Area= County= adult status: Western> Marion= began emerging in Stayton area April 7. (R.L. Penrose).

PUNCTUREVINE SEED WEEVIL (*Microlarinus lareynii*) - COLORADO - New county records. District> County= recovered on Tribulus terrestris (puncture-vine) from total of 10 sites: EC> Kiowa= at Haswell and SE> Prowers= at Lamar, Granada, and Holly areas, and Baca= at Pritchett, Lycan, Campo, and Stonington, September 20 and 21, 1978. All collected by L. Hollingsworth. Determined by D. Maddox. (Merlino).

FEDERAL AND STATE PROGRAMS

INSECTS

GRASSHOPPERS - NEW MEXICO - District> County= mostly Melanoplus differentialis and Schistocerca sp. egg clusters per 0.8 sq m: SE> Eddy= 25 in sandy river bank 7.2 km south and 6.0 km east of Artesia. (M. Perry). KANSAS - District> County= average of undetermined species, possibly 2nd instar MIGRATORY GRASSHOPPER (Melanoplus sanguinipes) per 100 sweeps in alfalfa [15 cm tall] field: SC> Sumner= 15. (G.A. Salsbury).

SCREWWORM (*Cochliomyia hominivorax*) - Total of 2 cases reported from continental United States, March 18-24 as follows: Texas 1, New Mexico 1 (collected June 19, 1978, determined March 20, 1979). Number of sterile flies released this period totaled 44,710,000 as follows: Texas 22,307,200; New Mexico 3,920,000; Arizona 16,977,800; California 1,505,000. Total of 129,941,600 sterile flies released within Barrier of Mexico. (J.E. Novy, M.E. Meadows).

HAWAII PEST REPORT

Slug and Snail Pests - GIANT AFRICAN SNAIL (*Achatina fulica*) light in infested areas surveyed on Kauai Island during March, due to dry weather conditions over most of island. (D.T. Sugawa).

Miscellaneous - Adults and immatures of EUROPEAN EARWIG (*Forficula auricularia*) under stones along roadside at elevation of 1,981 m at Puu Nianiau near Haleakala National Park, Maui Island. No damage reported to cultivated plants. (J.W. Beardsley).

DETECTION

NEW COUNTY RECORDS

INSECTS

MEADOW SPITTLEBUG (Philaenus spumarius) - NEBRASKA - Washington. (p. 181).

A MOSQUITO (Aedes atropalpus) - KENTUCKY - Jefferson. (p. 181).

PUNCTUREVINE SEED WEEVIL (Microlarinus lareynii) - COLORADO - Kiowa, Prowers, and Baca. (p. 182).

SUGARBEET ROOT MAGGOT (Tetanops myopaeformis) - IDAHO - Ada, Payette, and Washington. (p. 181).

CORRECTIONS

CPPR 4(12):151 - Nosema pyraustae (an insect fungus) should read Nosema pyraustae (corn borer protozoan).

LIGHT TRAP COLLECTIONS

Pest Interceptions of Quarantine Significance at Ports of Entry

Plant Importation and Technical Support Staff
Plant Protection and Quarantine Programs, USDA

<u>Life Stage</u>	<u>Host</u>	<u>Probable Origin</u>	<u>Port of Entry</u>	<u>Desti-nation</u>
<u><i>Conotrachelus aguacatae</i></u> Barber a weevil Det. R.L. Hodgdon	larval in avocados from baggage	Mexico	Laredo	TX
<u><i>Copitarsia</i></u> sp. a noctuid moth Det. D.M. Weisman	larval on <u><i>Gladiolus</i></u> from cargo	Mexico	Dallas	TX
<u><i>Ergates</i></u> sp. a cerambycid beetle Det. D.M. Anderson	larval in wood crates with disc brake pads	Italy	San Juan	PR
<u><i>Neoterpes</i></u> sp. a termite Det. D.R. Smith	adult with apples from cargo	Chile	Philadelphia	PA
<u><i>Operophtera brumata</i></u> (Linnaeus) winter moth Det. D.C. Ferguson	adult with military aircraft	West Germany	Dover	DE
<u><i>Bradybaena ravida</i></u> (Benson) a bradybaenid snail Det. R. Munkittrick	adult with <u><i>Camellia</i></u> plants from cargo	People's Republic of China	San Francisco	CA
<u><i>Cochlicella barbara</i></u> (Linnaeus) a helicid snail Det. J. Litton	juvenile with <u><i>Lagurus</i></u> grass from cargo	Spain	Mobile	AL
<u><i>Helicella protea</i></u> (Ziegler) a helicid snail Det. R. Munkittrick	adult on vans of military household goods	Turkey	Houston	TX

SUMMARY OF PEST CONDITIONS IN THE UNITED STATES - 1978

(Continued from page 174)

COTTON

HIGHLIGHTS

BOLL WEEVIL was absent or light on cotton in New Mexico, Texas, Oklahoma, and Arkansas but needed more controls in Mississippi. Boll weevil damage remained below threshold level in Tennessee and light for the third year in North Carolina. BOLLWORM and TOBACCO BUDWORM caused \$3.5 million of damage in Arizona and about 18% yield loss in South Carolina. Bollworm was the major cotton pest in New Mexico.

DISEASES

TEXAS ROOT ROT (*Phymatotrichum omnivorum*) reduced cotton yield by 50% in 809.4 ha (2,000 acres) of 182,109 ha (450,000 acres) of ARIZONA cotton. The disease was detected at a moderate level on cotton during September in Luna County, NEW MEXICO.

VERTICILLIUM WILT (*Verticillium albo-atrum*) was detected at a low level in a cotton field during September in Otero County, NEW MEXICO.

INSECTS

BOLL WEEVIL (*Anthonomus grandis grandis*) surveys and trapping in NEW MEXICO indicated this pest was absent in cotton areas. Counts in TEXAS were very light; only very late cotton had significant damage. Boll weevils were being collected in pheromone traps in the southwestern area of OKLAHOMA by the last week of May and activity continued through September. Infestations in cotton were very light in all areas through August. Some increase in numbers occurred in September in most areas but generally too late to cause economic damage. Very little, if any, cotton was treated in 1978.

Grandlure pheromone trap collections for boll weevil in cotton fields near southwestern ARKANSAS averaged up to 32 per trap in mid-May. Catches in the southeastern area averaged 8 adults per trap in late May. By mid-June catches had decreased to about 1 per trap. Relatively few adults on cotton plants throughout June indicated heavy mortality between abandonment of overwintering sites and colonization of fields. Boll weevil numbers continued light in eastern area fields throughout July. By mid-August, some fields in the north-eastern and southeastern areas had received treatment.

Overwintering emergence of boll weevils captured in pheromone traps during the week of May 12 in MISSISSIPPI indicated a sharp increase over 1977. Southern counties were highest with Clarke County reporting 123 weevils per 3 traps and Lincoln County 133 weevils per 2 traps. Northern and central counties showed an increase but were lighter compared to southern counties. As cotton began to square, weevils began to increase causing problems in southern and central areas. Populations decreased from early to mid-September. Insecticide applications was increased significantly over 1977. Economic damage was relatively uneven in northern Mississippi, and uniform in central and southern areas in the cotton-producing "hill sections".

Boll weevil damage (1-6%) to cotton began to appear in southern west TENNESSEE in mid-July. Overall, infestations were spotty and remained below threshold level due to unfavorable weather. Weevil damage was light for the third consecutive year in NORTH CAROLINA. Collections through mid-June from sex traps scattered across the cotton counties remained fewer than 1 adult per trap per week.

THURBERIA WEEVIL (Anthonomus grandis thurberiae) was first found in ARIZONA at Theba, Maricopa County, in late August. Infestations ranged from very light to 50% of cotton squares in 1 field with 90% of the squares in 1 corner of 1 field damaged in late September.

BOLLWORMS (Heliothis spp.) in ARIZONA caused \$3.5 million in damage to the cotton crop. Available pesticides did not provide adequate control. Bollworms began showing up in Yuma and Gila Counties in late May. In June, 2% of the cotton bolls were damaged in Pinal County, and counts were building up in Maricopa and Yuma Counties. Treatments began in Graham County in July. Bolls in Yuma County had 2-3% damage by late July. Counts reached highs of 1 larva and 2 eggs per terminal in Maricopa County, 1 egg and 1 larva per terminal in Pinal County, and 2-3 eggs and 10 larvae per terminal in Yuma County in August. Counts decreased slightly in September in Maricopa, Pinal, and Yuma Counties. Heavy populations were present in Graham County in October. Counts remained heavy in most cotton areas for the remainder of the growing season.

BOLLWORM (Heliothis zea) was the number one pest in cotton with heavy damage to squares and bolls in most cotton areas of NEW MEXICO from July through September. Very heavy numbers of this species and TOBACCO BUDWORM (Heliothis virescens) in the South Plains and San Angelo areas of TEXAS damaged many acres and needed treatment in areas which are seldom treated. H. zea activity in OKLAHOMA was first reported in cotton the first week of July and H. virescens was found the first week of August. Heavy infestations were found in some fields in most areas by the first of August and heavy numbers continued on a scattered basis through mid-September. Larvae collected from treated fields commonly consisted of 50-90% tobacco budworm during August and September.

H. zea and H. virescens problems in some southeastern cotton fields in ARKANSAS were unusually severe in late June. By late July, pressure was heavy across the eastern area with the heaviest populations in the southeastern area. Less than 4% of the southeastern larvae were tobacco budworm through July. By mid-August, some southeastern fields reached 127 eggs per 17 row m (56 row ft), and the larval species composition changed markedly in favor of tobacco budworm. Egg counts remained heavy (up to 15 per terminal) in some eastern area fields into early September. By mid-September, Heliothis pressure had decreased markedly in eastern area.

First generation H. zea and H. virescens eggs in MISSISSIPPI were first observed on cotton on June 10 in Warren County. A minimum of insecticide was applied for the first generation larvae due to good populations of beneficial insects. As second generation larvae appeared, about 10% of the acreage in the State had been treated for larvae by July 13 with the heaviest damage suffered in the south-central area. Third generation larvae peaked during the week of August 17 in the central and southern areas and about a week later in the northern counties. Delta counties appeared to have the heaviest populations with counts of 2.5 eggs per terminal not uncommon. Larval decrease during the last week of August was accelerated by dry conditions and early maturity of cotton. Southern and central areas had comparable populations to 1977 while the northern counties showed a decrease.

H. zea damage in TENNESSEE first appeared on cotton in late June and early July in several western counties. Damage ranged up to 5% infested bolls in Fayette and Lincoln Counties. Populations increased to treatable levels and above during late July and early August. A bollworm and budworm emergency was declared in Fayette, Hardeman, Haywood, Lake, Lincoln, Carroll, Chester, Crockett, Dyer, Gibson, Lauderdale, Madison, Shelby, McNairy, and Tipton Counties during this time. Populations remained heavy, at treatable levels in most areas through September.

H. zea was the primary foliage feeder on cotton in SOUTH CAROLINA and caused about a 3% yield loss. Control costs amounted to \$120,000. Bollworm and H. virescens were the major insects on cotton; about \$8,360,000 was spent during 1978 for control. The bollworm complex caused an estimated 18% yield loss during 1978. H. zea and H. virescens in NORTH CAROLINA exerted significant pressure on cotton during July in the Scotland and Robeson County area with the infestation by H. virescens constituting a significant proportion of the population during mid-August. Good weather for controls, close scouting and light bollworm pressure resulted in suppression in most northern cotton fields.

COTTON LEAFPERFORATOR (Bucculatrix thurberiella) in ARIZONA caused some reduction in yield. The heaviest damage occurred in Graham, Pinal, and parts of Pima Counties. Infestations began appearing in cotton-growing areas in early July. Heavy counts were present in Pinal and Yuma Counties in late July. Pinal County had the heaviest infestation, counts reached 40-2,000 larvae per sweep. Controls were applied.

Up to 5 BLACK CUTWORM (Agrotis ipsilon) and VARIEGATED CUTWORM (Peridroma saucia) larvae per plant in ARKANSAS destroyed an 80.9-ha (200-acre) stand of cotton in the southeastern area and seriously damaged another 60.7-ha (150-acres) cotton stand in early June.

BEET ARMYWORM (Spodoptera exigua) in ARIZONA reduced yield by a bale of cotton per 0.4 ha (acre) in some areas of Maricopa, Pinal, and Yuma Counties. Populations began building up in late September with counts reaching 1-3 larvae per sweep in Maricopa and Pinal Counties. Counts were reduced in October but heavy infestations were found in spots of Maricopa County in November.

Heavy TARNISHED PLANT BUG (Lygus lineolaris) numbers in ARKANSAS were found in a southeastern cotton field as early as June 9; a few fields were treated by late June. By late July, numbers in northeastern area reached 2.5 per 0.3 row m (row ft); about 15-20% of the fields were treated by August 1. Numbers had increased to 5 per 0.3 row m in some fields in the northeastern area by early August.

Tarnished plant bug appeared on cotton in the delta counties of MISSISSIPPI during early to mid-June with problems occurring during the week of June 29 in many areas of the State. Infestations ranged 3-50% in Alcorn, Carroll, Calhoun, Chickasaw, Madison, and Pontotoc Counties on June 29. Plant bugs were no longer a problem after insecticide schedules were initiated for BOLL WEEVIL (Anthonomus grandis grandis) and BOLLWORM (Heliothis spp.) populations during mid-July.

LYGUS BUGS (Lygus spp.) in ARIZONA reduced cotton yields in some spots where controls were not applied when counts were building up. Lygus bugs started showing up in May in Maricopa, Pinal, and Yuma Counties. Light populations were still present in these counties in June. Populations started showing up in Graham County in July. In mid-July, 20-30% of the bolls in Pinal County had damaged seed. Population reached 1 per sweep in Maricopa County in October. Good control was obtained when pesticide application was timely.

Population of mostly SAY STINK BUG (Chlorochroa sayi) caused extensive damage to cotton squares and bolls in Chaves, Eddy, and Luna Counties, NEW MEXICO, in August.

Heavy populations of COTTON FLEAHOPPER (Pseudatomoscelis seriatus) in the St. Lawrence Valley and the Trans-Pecos area of TEXAS damaged cotton later than usual.

TOBACCO

DISEASES

POTATO VIRUS Y - See GREEN PEACH APHID (Myzus persicae) below.

INSECTS

TOBACCO BUDWORM (Heliothis virescens) in FLORIDA was the main pest of tobacco in 1978. Populations were heavier in early season than in 1977 but decreased to a normal level by the end of the season. Infestations in SOUTH CAROLINA caused about 5% yield loss of tobacco, about the same as in 1977, but the acreage increased from 27,519 ha (68,000 acres) in 1977 to 28,328 ha (70,000 acres) in 1978, resulting in a greater overall loss.

Tobacco budworm was ranked fifth in order of insects important on tobacco in NORTH CAROLINA in 1978. Infestation levels in the southern Coastal Plain peaked at 11% of the fields at threshold during June 16-28. The level of infestation was lighter north and west of Lenoir and Wayne Counties. This compares to 50% of the southern coastal fields reaching threshold during the same period in 1977.

By the end of June, 50% of the tobacco fields surveyed for NOCTUID MOTHS (Heliothis spp.) in TENNESSEE were at or above control levels. Larvae decreased from 0-2,167 per 0.4 ha (acre) the week ending July 28 to 0-200 per 0.4 ha by the last week of August. Controls were effective. Infestations in general were about the same as in 1977. Populations were lighter than normal in KENTUCKY. Only about 15-20% of the tobacco acreage was treated for this pest in 1978 compared to 45% in 1977.

BLACK CUTWORM (Agrotis ipsilon) larvae in KENTUCKY damaged tobacco plant beds during May and cut plants in fields during June. About 10% of the plant beds and 5-10% of the field acreage were treated. Damage by this early season tobacco pest in NORTH CAROLINA increased significantly from the previous 5 years. Reports were first received from the northern Piedmont area and followup surveys revealed 30% plants damaged in scattered 1 to 4-ha (3 to 10-acre) fields. The infestation was concentrated in a band of counties from Yadkin County in the west to Pitt and Martin Counties in the east. Damage was most common in scattered, poorly drained, late-set fields. Infestations on 20-40% of the plants were common June 5-8.

TOBACCO HORNWORM (*Manduca sexta*) populations on tobacco in FLORIDA were about 7% lighter than in 1977 and occurred on plants about 3 weeks later than in 1977. Damage to tobacco in SOUTH CAROLINA was limited (about 0.5%), but control costs to achieve this level ran about \$10 per 0.4 ha (acre).

Tobacco hornworm populations in NORTH CAROLINA began increasing on tobacco in the Bladen County area during late June with about 5% of the 200+ fields scouted weekly reaching threshold. Infestation peaked during August 4-18 with about 27% of the central and northern Coastal Plain fields at threshold.

Population levels were greater in the northern Coastal Plain with some fields reaching 70% plants infested; however, infestation levels averaged 21-28% of the plants infested during August 4-18 in Lenoir, Edgecombe, and Martin Counties. Infestations in the southern Coastal Plain did not exceed 17% of the plants infested as indicated by surveys in the 200+ fields. Infestation levels in Lenoir and Bladen Counties exceeded 15% of the plants infested for only 1 week during 1977.

By the week ending June 30, 50% of the tobacco fields surveyed for a SPHINGID MOTH (*Manduca* sp.) in TENNESSEE were at or above control levels. Larvae ranged up to 7,500 per 0.4 ha (acre). Population levels remained heavy up to the first week of September.

The first TOMATO HORNWORM (*Manduca quinquemaculata*) adult in KENTUCKY was found on June 6 and the first TOBACCO HORNWORM (*M. sexta*) on June 12, both from a blacklight trap in Todd County. Larvae were heavy on tobacco in late June and early July. The amount of acreage treated was about 30% compared to 40% in 1977, probably due to the average populations during August, possibly because of the parasites.

TOBACCO FLEA BEETLE (*Epitrix hirtipennis*) populations were very light in KENTUCKY. Adults averaged less than 1 per tobacco plant throughout the season in most fields. An estimated 20% of the tobacco acreage was treated compared to about 64% in 1977. Damage on tobacco in SOUTH CAROLINA was estimated at about 0.5% overall. Control costs averaged \$7.25 per 0.4 ha acre.

GREEN PEACH APHID (*Myzus persicae*) populations in FLORIDA were lighter on tobacco than in 1977 and remained light all season, accounting for the light prevalence of POTATO VIRUS Y.

Green peach aphid populations in NORTH CAROLINA on tobacco increased to problem status in the northern Coastal Plain counties during mid-June and remained until early August. This situation is highly unusual. Infestations in Lenoir, Edgecombe, Martin, and Halifax Counties peaked during mid-July with 70% of the plants infested in some fields. In Lenoir County, 30% of 182 fields scouted reached threshold July 7-11. Need for control subsided July 21 to August 4 in all counties as harvesting progressed.

Green peach aphid problems in KENTUCKY were fewer than in recent years. Although heavy populations did occur in some tobacco fields, populations decreased early due to damp weather and disease. An estimated 15-20% of the tobacco acreage was treated during 1978 compared to 35% in 1977.

GRASSHOPPER nymphs and adults caused serious damage in several tobacco fields throughout KENTUCKY, especially where fields were surrounded by tall grass and weeds. Damage was heavy enough to require treatment in many fields.

SUGAR BEETS

DISEASES

A RHIZOCTONIA CROWN ROT (Rhizoctonia sp.) was reported on sugar beets from the northwest, west-central, and southwest districts of KANSAS. Prevalence in the fields surveyed ranged from trace to 5%. TIP ROTS (Erwinia sp. and Rhizopus sp.) were present in many of the same fields. Estimated loss from crown and tip rots was 0.1%.

A POWDERY MILDEW (Erysiphe polygoni) was reported on sugar beets from the northwest, west-central, and southwest districts of KANSAS. Infection occurred late in the season, but this disease became severe in some fields. About 3,000 ha (8,000 acres) were treated for this disease. Estimated loss was 0.2%.

INSECTS

SUGARBEET WIREWORM (Limonius californicus) damage to several sugar beet fields in southwestern IDAHO required fields to be plowed.

ALFALFA LOOPER (Autographa californica) populations in IDAHO of 3-4 per plant in small sugar beets caused defoliation and required treatment in the south-central area.

FALSE CELERY LEAFTIER (Udea profundalis) larvae and adults in WASHINGTON were collected from sugar beet fields near Basin City and north of Pasco, Franklin County, and Othello, Adams County. Economic damage was reported in some fields. Populations appear to have been increasing over the past few years.

No sugar beet fields that were examined were seriously damaged by SUGARBEET ROOT MAGGOT (Tetanops myopaeformis) in IDAHO. Adult flights started May 22 and peaked June 9 in Twin Falls County. There were new distribution records in Ada, Payette, and Washington Counties (See page 181, this issue). By June 9, adults in NORTH DAKOTA were evident at the rate of 1 per 3.0 row m (10 row ft) in the west-central district. Adults peaked on June 12 with 252 trapped at 5 sites in the northeastern area. Trapping began on June 3 with a total of 56 adults collected.

BEET LEAFHOPPER (Circulifer tenellus) adults on sugar beets in IDAHO during spring averaged 10 per 9.29 sq m (100 sq ft) samples, compared to 17 per 9.29 sq m sample in 1977. A total of 50 per 9.29 sq m is considered economic.

MISCELLANEOUS FIELD CROPS

INSECTS

ROOT WEEVILS, mainly BLACK VINE WEEVIL (Otiorhynchus sulcatus) and STRAWBERRY ROOT WEEVIL (Otiorhynchus striatus), in IDAHO seriously damaged hop plants near Wilder where dying plants caused yards to be taken out of hops. No chemicals are registered which are effective for the control of these pests. The crop was destroyed in a 32-ha (80-acre), 2-year-old peppermint field in Canyon County. This is the first time damage by this pest has been this serious in Idaho.

The first occurrence of SUNFLOWER BEETLE (Zygogramma exclamationis) for the season in NORTH DAKOTA was detected the week of May 29 to June 2 with fewer than 1 adult per sunflower plant in the east-central area. Larvae were also

observed at this time. By June 23, sunflower beetle larvae at the rate of 4 per 25 plants were lightly feeding in the east-central district. As of June 16, sunflower beetle adults were detected in the northeastern area. Very light feeding was evident in the central district June 10-14.

In MINNESOTA, sunflower beetle first appeared on sunflower plants 60 cm (24 in) tall during June 5-9 in Kittson, Norman, and Red Lake Counties. Larvae averaged 1 per 100 plants. A week later, larvae averaged 2 per 100 plants in Kittson, Mahnomen, Pennington, and Polk Counties. Damage was not economic in most fields; however, one 40-ha (99-acre) field in Marshall County was treated at a cost of \$500.

By June 16, infestations of DARKSIDED CUTWORM (Euxoa messoria) and REDBACKED CUTWORM (E. ochrogaster) in southeastern NORTH DAKOTA were detected at the rate of 1 larva per 1-3 row m (4-8 row ft) of sunflowers. All stages of development were present with most larvae in the 3rd and 4th instar. By June 30, damage occurred in fields surveyed in the central, east-central, and northeast districts. Heaviest damage at this time occurred in the east-central district where about 80 ha (200 acres) were destroyed in Barnes County. One field in Grand Forks County was 10-15% destroyed.

Darksided cutworm in MINNESOTA was the most serious of the cutworm pests of sunflowers in 1978. Economic damage was reported by June 12 in Swift, Pope, Grant, Renville, Wright, Murray, Freeborn, and Le Sueur Counties. STRIPED CUTWORM (Euxoa tessellata) was reported only from Polk County. A total of 44,000 ha (108,725 acres) of sunflowers was destroyed. Based on average planting and treatment costs of \$25 per ha (2 acres), the annual loss from cutworms reached \$1.1 million.

Larvae of a NOCTUID MOTH (Stibadium spumonosum) were collected in OREGON from wild Helianthus annuus (sunflower) in northern Gilliam County in late August for a new State record. See CPPR 4(5-6):62.

Moderate to heavy CORN EARWORM (Heliothis zea) populations in SOUTH CAROLINA damaged the fall sunflower crop. No TegaT controls are available for this pest.

FALL ARMYWORM (Spodoptera frugiperda) caused problems on late-season sunflowers in SOUTH CAROLINA. No chemicals were registered for controls.

SUNFLOWER MOTH (Homoeosoma electellum) larvae were collected from wild Helianthus annuus (sunflower) in northern Gilliam County for a new State record in OREGON and from commercial sunflowers in Umatilla County for a new county record. See CPPR 4(8):80. Infestations in WASHINGTON were reported throughout the sunflower fields in the Walla Walla Valley, Walla Walla County. Extent of damage varied but was greater on late-growing sunflowers.

SUNFLOWER BUD MOTH (Suleima helianthana) adults in NORTH DAKOTA were detected by June 16 in the east-central and southeast districts. Larvae at the rate of 1 per 25 sunflower plants were detected in the east-central district by June 23. As of July 14, pupation was underway in the east-central district.

Light larval feeding by PAINTED LADY (Cynthia cardui) in NORTH DAKOTA was evident with 1 larva per 15 sunflower plants by July 7 in the southeastern area. By July 14, light populations were detected in the central district and controls were being applied in the east-central district.

SUNFLOWER MIDGE (*Contarinia schulzi*) in MINNESOTA infested sunflowers in Marshall and Polk Counties by July 28. In some fields, heads in the outer 20 rows had as much as 75% damage which decreased to 1% beyond the fiftieth row. Infestations were reported from Norman County by August 4. About 400 ha (1,000 acres) of sunflower fields were treated in Marshall County to control the sunflower midge at an estimated cost of \$5,000.

Heavy ALFALFA LOOPER (*Autographa californica*) and VARIEGATED CUTWORM (*Peridroma saucia*) population levels were found in Willamette Valley, OREGON, peppermint fields. Season long counts on a total of 485.6 ha (1,200 acres) of mint scattered from Woodburn, Marion County, south to Junction City, Lane County, revealed that 1 or both species exceeded an economic threshold of 3-5 larvae per sweep on 90% of the acreage surveyed. Larval numbers of alfalfa looper peaked in mid-June, those of variegated cutworm in mid-July. One treatment, applied about July 1, was recommended to control both species. Half the acreage or 243 ha (600 acres) received 1 application for loopers, 30% or 148 ha (365 acres) for cutworms, and 10% or 48.6 ha (120 acres) was treated twice, once for each species.

REDBACKED CUTWORM (*Euxoa ochrogaster*) continued to decrease in central OREGON peppermint fields. Although larvae were easily found, populations were generally subeconomic throughout the region. Only 3 plantings were treated. In the most heavily infested fields, larvae averaged 11.2 per 1,000 sq cm (155.0 sq in), with some subsample counts as high as 23 per 1,000 sq cm.

Economic larval population of a PYRALID MOTH (*Fumibotys fumalis*) in WASHINGTON reached economic levels (ranging up to 30 per 0.09 sq m (sq ft) heavily damaged peppermint in the Harrah and West Wapato region of the Yakima Valley. Fields heavily damaged were taken out of mint. Most mint-producing areas of Washington are as yet unaffected by the pest.

Spider mites, mostly TWOSPOTTED SPIDER MITE (*Tetranychus urticae*), remained the chronic problem for central OREGON mint growers. This mite and ALFALFA LOOPER (*Autographa californica*) caused treatment of 82% of 467.0 ha (1,154 acres) monitored in the Madras area, Jefferson County. Economic thresholds for loopers, 3-5 larvae per sweep, and mites 5-10 per leaf, were met or exceeded on 20% of this acreage by mid-June. Two weeks before harvest (August 1) another 30% required treatment. Another 30% received a double application for control of these pests.

ESTIMATED LOSSES FROM RUST IN 1978

Compiled by David L. Long 1/

Acreage harvested and yield and production records based on Crop Production 1978 Annual Summary, USDA, CrPr2-1 (79). Loss data, summary of estimates by personnel of the State Departments of Agriculture, University extension and research projects, Plant Protection Programs of the Animal and Plant Health Inspection Service, the Science and Education Administration, USDA, Crop Quality Council, and the Cereal Rust Laboratory.

WINTER WHEAT

State	1,000 of acres harvested	Yield in bushels per acre	Production in 1,000 bushels of bushels	Losses due to -		Per cent	Per cent	Per cent			
				Leaf rust							
				Stem rust	1,000 bushels						
Alabama	65	26.0	1,690	0	0	2.0	34.5				
Arkansas	300	37.0	11,040	0	0	4.0	462.5	Trace			
California	600	62.0	37,200	0	0	Trace	Trace				
Colorado	2,400	23.0	55,200	0	0	Trace	Trace				
Florida	12	36.0	432	0	0	1.0	4.4				
Georgia	120	32.0	3,840	0	0	Trace	Trace				
Idaho	815	54.0	44,010	0	0	3.0	1,361.1	Trace			
Illinois	930	38.0	35,340	Trace	Trace	3.5	1,281.8				
Indiana	815	39.0	31,785	0	0	1.0	321.1				
Iowa	55	31.0	1,750	Trace	Trace	Trace	Trace				
Kansas	10,200	30.0	306,000	Trace	Trace	1.5	4,659.9				
Kentucky	195	35.0	6,825	0	0	2.5	175.0				
Michigan	450	40.0	18,000	Trace	Trace	2.0	367.3				
Minnesota	58	29.0	1,682	Trace	Trace	Trace	Trace				
Mississippi	65	31.0	2,015	0	0	2.0	41.1				
Missouri	840	34.0	28,560	Trace	Trace	Trace	Trace				
Montana	2,700	31.0	83,700	Trace	Trace	Trace	Trace				
Nebraska	2,550	32.0	81,600	Trace	Trace	Trace	Trace				
North Carolina	180	33.0	5,940	0	0	Trace	Trace				
North Dakota	135	29.0	3,915	Trace	Trace	1.0	39.5				
Ohio	1,125	39.0	43,875	0	0	Trace	Trace				
Oklahoma	5,400	27.0	145,800	Trace	Trace	7.0	10,974.2				
Oregon	1,100	43.0	47,300	0	0	2.0	1,017.2				
Pennsylvania	245	33.0	8,085	0	0	Trace	Trace				
South Carolina	78	33.0	2,574	0	0	Trace	Trace				
South Dakota	700	26.0	18,200	Trace	Trace	1.0	183.8				
Tennessee	220	35.0	7,700	Trace	Trace	5.0	405.3				
Texas	2,700	20.0	54,000	Trace	Trace	1.3	711.2	Trace			
Virginia	155	35.0	5,425	0	0	Trace	Trace				
Washington	2,600	47.0	122,200	0	0	8.0	11,237.0	5.0			
West Virginia	9	33.0	2,297	0	0	Trace	Trace	7,023			
Wisconsin	33	36.0	1,188	Trace	Trace	0.2	2.4	Trace			
Wyoming	275	26.0	7,150	0	0	Trace	Trace				
U.S. TOTAL	38,909	32.1	1,248,272	Trace	Trace	26.0	33,279.3	0.75			
Total of above	38,125	32.1	1,224,378	Trace	Trace			9,566			
Mean of above											

SPRING WHEAT						
State	1,000 of acres harvested	Yield in bushels per acre	Production in 1,000 bushels	Losses due to -		
				Stem rust Per cent	Leaf rust Per cent	Stripe rust Per cent
Colorado	44	47.0	2,068	0	0	0
Idaho	480	64.0	30,720	0	1.0	323.4
Minnesota	2,620	33.5	87,770	0	Trace	Trace
Montana	1,850	29.0	53,650	Trace	Trace	Trace
North Dakota	6,210	29.0	180,090	Trace	Trace	Trace
Oregon	125	37.0	4,625	0	2.0	105.1
South Dakota	2,200	20.0	44,000	Trace	Trace	Trace
Washington	310	38.0	11,780	0	8.0	1,149.3
Wisconsin	12	31.0	372	Trace	Trace	Trace
Wyoming	19	24.0	456	Trace	Trace	Trace
U.S. TOTAL	13,906	30.0	417,112	Trace	1,577.8	3,255.6
Total of above	13,870		415,531	Trace	0.38	0.78
Mean of above		30.0				

DURUM WHEAT						
State	1,000 of acres harvested	Yield in bushels per acre	Production in 1,000 bushels	Losses due to -		
				Stem rust Per cent	Leaf rust Per cent	Stripe rust Per cent
California	115	75.0	8,625	0	0	0
Minnesota	98	38.5	3,773	0	0	0
Montana	290	30.0	8,700	0	0	0
North Dakota	3,240	31.5	102,060	Trace	Trace	Trace
South Dakota	190	20.0	3,800	Trace	Trace	Trace
U.S. TOTAL	4,024	33.1	133,328	Trace	Trace	Trace
Total of above	3,933		126,958	Trace	Trace	0
Mean of above		32.3				

State	1,000 of acres harvested	Yield in bushels per acre	Production in 1,000 of bushels	Losses due to -		Crown Rust 1,000 bushels
				Stem rust per- cent	1,000 bushels	
Alabama	30	40.0	1,200	0	0	2.0
Arkansas	55	73.0	4,015	Trace	1.0	40.5
California	106	48.0	5,088	2.0	110.6	331.8
Colorado	40	44.0	1,760	0	0	0
Georgia	65	53.0	3,445	0	0	Trace
Idaho	49	64.0	3,136	0	0	0
Illinois	275	56.0	15,400	0	0	155.6
Indiana	165	54.0	8,910	0	0	Trace
Iowa	1,150	58.0	66,700	Trace	1.0	673.7
Kansas	120	39.0	4,680	Trace	Trace	Trace
Kentucky	7	42.0	294	0	0	Trace
Michigan	360	57.0	20,520	Trace	Trace	5.0
Minnesota	1,830	54.0	98,820	Trace	Trace	2.0
Missouri	35	38.0	1,330	Trace	Trace	1.0
Montana	208	51.0	10,608	Trace	Trace	Trace
Nebraska	450	47.0	21,150	Trace	Trace	Trace
North Carolina	95	55.0	5,225	0	0	Trace
North Dakota	1,220	54.0	65,880	Trace	Trace	1.0
Ohio	400	61.0	24,400	0	0	Trace
Oklahoma	95	36.0	3,420	Trace	Trace	Trace
Oregon	70	60.0	4,200	0	0	0
Pennsylvania	340	53.0	18,020	0	0	Trace
South Carolina	75	52.0	3,900	Trace	Trace	Trace
South Dakota	2,210	46.5	102,765	Trace	3.0	3,178.3
Tennessee	25	45.0	1,125	0	0	Trace
Texas	430	32.0	13,760	5.0	739.8	295.9
Virginia	36	45.0	1,620	0	0	0
Washington	30	62.0	1,860	0	0	0
West Virginia	12	42.0	504	0	0	0
Wisconsin	1,120	56.0	62,720	0.1	63.0	0.4
Wyoming	49	56.0	2,744	0	0	0
U.S. TOTAL	11,531	52.2	601,477	0.16	913.4	1.48
Total of above	11,152		579,199			
Mean of above		51.9				

BARLEY									
State	1,000 of acres harvested	Yield in bushels per acre	Production in 1,000 of bushels	Stem rust		Losses due to -			Per- cent 1,000 bushels
				Per- cent	1,000 bushels	Leaf rust	Per- cent	1,000 bushels	
California	950	48.0	45,600	0	0	0	0	0	0
Colorado	240	64.0	15,360	0	0	0	0	0	0
Idaho	930	60.0	55,800	0	0	0	0	0	0
Illinois	7	36.0	252	0	0	0	0	0	0
Kansas	60	44.0	2,640	0	0	0	0	0	0
Kentucky	23	43.0	989	0	0	0	0	0	0
Michigan	19	47.0	893	0	0	0	0	0	0
Minnesota	1,050	49.5	51,975	Trace	Trace	Trace	0	0	0
Montana	1,375	41.0	56,375	0	0	0	0	0	0
Nebraska	29	38.0	1,102	0	0	0	0	0	0
North Carolina	59	51.0	3,009	0	0	0	0	0	0
North Dakota	2,450	46.0	112,700	Trace	Trace	Trace	0	0	0
Ohio	10	48.0	480	0	0	0	0	0	0
Oklahoma	80	34.0	2,720	0	0	0	0	2.0	55.5
Oregon	185	50.0	9,250	0	0	0	0	0	0
Pennsylvania	125	47.0	5,875	0	0	0	0	0	0
South Carolina	24	47.0	1,128	0	0	0	0	0	0
South Dakota	565	31.0	20,905	Trace	Trace	Trace	0	0	0
Tennessee	13	34.0	442	0	0	0	0	0	0
Texas	40	27.0	1,080	0	0	0	0	0	0
Virginia	101	50.0	5,050	Trace	Trace	Trace	0	0	0
Washington	380	65.0	24,700	0	0	0	0	0	0
West Virginia	10	44.0	440	0	0	0	0	0	0
Wisconsin	27	49.0	1,323	0	0	0	0	0	0
Wyoming	131	63.0	8,253	0	0	0	0	0	0
U.S. TOTAL	9,233	48.4	447,008	Trace	Trace	Trace	0.01	55.5	0
Total of above	8,883	48.2	428,341						
Mean of above									

State	1,000 of acres harvested	Yield in bushels per acre	Production in 1,000 of bushels	Losses due to -		
				Stem Rust	Per- cent	Leaf Rust 1,000 bushels
Colorado	5	21.0	105	0	0	0
Georgia	110	23.0	2,530	0	0	Trace
Illinois	16	23.0	368	0	0	0
Indiana	9	25.0	225	0	0	0
Kansas	15	21.0	315	0	0	0
Kentucky	4	27.0	108	0	0	0
Michigan	25	24.0	600	0	0	Trace
Minnesota	98	24.0	2,352	Trace	Trace	Trace
Missouri	7	25.0	175	0	0	0
Nebraska	53	19.0	1,007	0	0	0
North Carolina	20	23.0	460	0	0	Trace
North Dakota	205	31.0	6,355	Trace	Trace	Trace
Ohio	8	30.0	240	0	0	0
Oklahoma	30	19.0	570	0	0	0
Oregon	7	25.0	175	0	0	0
Pennsylvania	16	32.0	512	0	0	0
South Carolina	38	22.0	836	0	0	0
South Dakota	220	31.0	6,820	Trace	Trace	0.5
Tennessee	2	19.0	38	0	0	0
Texas	29	14.0	406	0	0	0
Virginia	17	25.0	425	Trace	Trace	Trace
Washington	3	21.0	63	0	0	0
Wisconsin	17	21.0	357	0	0.1	0.4
Wyoming	3	22.0	66	0	0	0
U.S. TOTAL	995	26.3	26,160	Trace	0.14	34.6
Total of above	957	26.2	25,108	Trace		
Mean of above						

U.S. Dep. Agric.
Coop. Plant Pest Rep.
4(13):194-198

METRIC CONVERSION

1 cm = 0.393701 in
1 m = 3.28084 ft = 1.09361 yd
1 km = 0.621371 mi
1 sq cm = 0.155000 sq in
1 sq m = 10.7639 sq ft = 1.19599 sq yd
1 ha = 2.47104 acres
1 sq km = 0.386101 sq mi
1 kg = 2.20462 lb
1 t (metric ton) = 1.10231 short ton
1 kg/ha = 0.892183 lb/acre
1 t/ha = 0.446091 ton/acre

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Apr 27, 1979

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AMERICAN PLANT
PEST REPORT



This publication is distributed weekly to Federal and State agencies, universities, farmers, and others interested in containing or controlling pests in the United States.

Data included in this publication are compiled from reports submitted by cooperating State, Federal and other agricultural and industrial specialists. Accuracy of the reports is not verified prior to publication.

Cooperative Plant Pest Report supersedes *Cooperative Economic Insect Report*, which was discontinued with Volume 25, Numbers 49-52, 1975.

Correspondence should be directed to:

CPPR

New Pest Detection and Survey Staff
Plant Protection and Quarantine Programs
Animal and Plant Health Inspection Service
U.S. Department of Agriculture
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Hyattsville, Maryland 20782

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COOPERATIVE PLANT PEST REPORT**HIGHLIGHTS**Current Conditions

BLACK CUTWORM adults caught for first of season in Indiana and almost tripled catch of 1978 in Ohio. (p. 202).

ALFALFA WEEVIL affected 50% or more of alfalfa tips in southeastern area of New Mexico, south-central and west-central areas of Oklahoma, parts of Tennessee, and southern parts of Indiana. (p. 203-204).

First TOBACCO HORNWORM egg on tobacco in Florida early by 2-3 weeks. (p. 205).

CABBAGE LOOPER and DIAMONDBACK MOTH problems on cabbage in central area of Florida. (p. 206).

Prediction

Numbers of overwintered ALFALFA WEEVIL adults in Kansas indicate greater potential for damage than expected. (p. 203).

Detection

A CHRYSOMELID BEETLE in Pennsylvania is new for the Western Hemisphere. (p. 202).

PINE WOOD NEMATODE in Missouri is also new for the Western Hemisphere. (p. 207).

For new county records see page 210.

Some First Occurrences of the Season

ALFALFA WEEVIL pupae in Oklahoma and larvae in Ohio. MEADOW SPITTLEBUG nymphs in Indiana. SPRING CANKERWORM larvae in Kansas. AMERICAN DOG TICK in Oklahoma and Minnesota. CEREAL LEAF BEETLE adults in Ohio. An ICHNEUMONID WASP in Indiana.

Special ReportsSummary of Pest Conditions in the United States - 1978

Potatoes, Tomatoes, Peppers (p. 213-215).

Beans and Peas (p. 215-217).

Cole Crops (p. 217-218).

Curcurbitis (p. 219).

General Vegetables (p. 219).

New Geographical Distribution Records for Forty-four Species and Subspecies of Tabanids in West Virginia. (p. 220-224).

Reports in this issue are for the week ending April 20 unless otherwise indicated.

CONTENTS

Corn, Sorghum, Sugarcane Insects.....	202	Cole Crops Insects.....	206
Small Grains Insects.....	202	General Vegetables Insects.....	206
Turf, Pastures, Rangeland Insects.....	202	Deciduous Fruits and Nuts Insects.....	207
Forage Legumes Insects.....	203	Citrus Insects.....	207
Cotton Insects.....	205	Ornamentals Insects.....	207
Tobacco Insects.....	205	Forest and Shade Trees Diseases.....	207
Sugar Beets Insects.....	205	Insects.....	208
Potatoes, Tomatoes, Peppers Insects.....	206	Man and Animals Insects.....	208
Beans and Peas Insects.....	206	Households and Structures Insects.....	208
Beneficial Organisms and Their Enemies Insects.....	208		
Federal and State Programs Insects.....	208		
Hawaii Pest Report.....	209		
Detection.....	210		
Corrections.....	210		
Light Trap Collections.....	211		
Pest Interceptions of Quarantine Significance at Ports of Entry.....	212		

Summary of Pest Conditions in the United States - 1978

Potatoes, Tomatoes, Peppers	
Diseases.....	213
Insects.....	213
Beans and Peas	
Diseases.....	215
Insects.....	216
Cole Crops	
Insects.....	217
Cucurbits	
Diseases.....	219
Insects.....	219
General Vegetables	
Diseases.....	219
Insects.....	219

New Geographical Distribution Records for Forty-Four Species and Subspecies of Tabanids in West Virginia.....	220
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CORN, SORGHUM, SUGARCANE

INSECTS

A CHRYSOMELID BEETLE (*Psylliodes picina* (Marsham)) - PENNSYLVANIA - New Western Hemisphere record. District> County= collection data: NC> Bradford= 1 male from corn field near Ulster by H.G. Gates, July 6, 1978. Determined by E.R. Hoebeke; confirmed by S.L. Shute. (R. Hoebeke). Known from *Cirsium palustre* (a thistle), *Lysimachia vulgaris* (garden loosestrife), *Lythrum salicaria* (purple loosestrife), and *Quercus* (oaks) in Europe. (R.E. White).

BLACK CUTWORM (*Agrotis ipsilon*) - KANSAS - District> County= status on corn: NE> Brown, Jefferson, and Riley; EC> Shawnee; SC> Sedgwick and Kiowa; C> Ellis; and SW> Finney= adults in blacklight traps, no larvae detected. (K.O. Bell, Jr.). INDIANA - First of season. District> County= status on corn: WC> Tippecanoe= adults in pheromone traps night of April 11-12. (J. Turrell). OHIO - Adults much heavier in pheromone traps in corn than same time in 1978, total of 94 adults taken by April 20 compared to 36 in 1978. (D. Woods, S. Clement).

SMALL GRAINS

INSECTS

GREENBUG (*Schizaphis graminum*) - TEXAS - District> County= counts per 0.3 row m of small grains: Cross Timbers> Archer= 1-5; Southern Low Plains> Baylor= 1-5 and Northern Low Plains> Foard= 1-6, Wichita= 1-7, and Wilbarger= 2-11. (J.A. Jackman).

CHINCH BUG (*Blissus leucopterus leucopterus*) - KANSAS - District> County= adult status on wheat: EC> Anderson and SE> Atten, Woodson, Wilson, and Labette= none in 9 fields (S.C. White); NE> Pottawatomie= flying; Atchison and Doniphan and EC> Coffey= averaged 0-0.2 per 0.3 row m in 3 fields (B.D. Hilbert); SE> Neosho and SC> Sedgwick= flights indicated by catches in sticky traps April 11-17. (K.O. Bell, Jr.).

NEBRASKA - District> County= chinch bug adults (and average) per 0.09 sq m of bunchgrass surveyed April 9: E> Lancaster in south-central area and SE> Gage in western one-half= 0-3,904 (1,206); current counts light after 4 days of 21° C temperature, probably indicated most had left bunchgrasses: SE> Otoe, Johnson, Pawnee, and Gage in eastern area= 5.8-262.4 (70.8); no adults in 4 wheat fields. (Roselle, T. Miller).

WINTER GRAIN MITE (*Penthaleus major*) - TEXAS - District> County= counts (maximum) per 0.3 row m of small grains: Cross Timbers> Archer= 82 (200); Southern Low Plains> Baylor= 82 (200) and Northern Low Plains> Foard= 3-9 and Wichita= (1). (J.A. Jackman).

TURF, PASTURES, RANGELAND

INSECTS

ARMY CUTWORM (*Euxoa auxiliaris*) - KANSAS - District> County= averages of larvae (1-3.8 cm long) per 0.09 sq m April 13: SC> Comanche= 1-7 on rangeland at 1 location. (G.A. Salsbury).

FORAGE LEGUMES

INSECTS

ALFALFA WEEVIL (*Hypera postica*) - NEVADA - District> County= larvae per sweep of hay alfalfa: S> Clark= 30 on 80.9 ha and 5 on 20 ha with oat cover crop at Las Vegas. (W. Hoff, D. Zoller).

NEW MEXICO - District> County= alfalfa weevil larval status week ending April 6. SE> Dona Ana= treatment of alfalfa fields in northern area effective, populations seem to have decreased in few fields in Hatch area. Damage minor to economic in untreated fields. (G. Nielsen). Eddy= heavy damage continued, larvae averaged 15-30 per sweep in many fields in southern area (averaged 40 per sweep in 1 field March 30), and larvae 1-4 per stem on 40-60% of stems with continued pupation in Artesia area. Lea= in 10-20% of stems in Lovington and Hobbs areas. NE> De Baca= larvae 1-3 in up to 25% of stems in Ft. Sumner area in 4 fields. (L. Gholson).

OKLAHOMA - First alfalfa weevil pupae of season. District> County= eggs, larvae, adults, and tip infestations on alfalfa week ending April 13 unless stated otherwise: SC> Stephens= eggs averaged 22 per 0.09 sq m by April 4, larvae and few pupae in cocoons, adults 10 per 30 sweeps, and averaged 70% and Garvin= no data, no data, no data, and 29 of 30 stems infested in 1 untreated field with 30% reinfested in several treated fields; SW> Jackson, Greer, Kiowa, Tillman, and Harmon= no data, no data, adults common, and ranged 5-50% (some fields treated); WC> Washita= no data, no data, adults 25 per 50 sweeps, tips up to 60% infested in untreated alfalfa; C> Grady= eggs 3 per 0.09 sq m by April 5, larvae in cocoons April 12, adults averaged 3 per 30 sweeps, and tips infested, 37%; EC> Muskogee and NE> Wagoner and Tulsa= no data, larvae averaged less than 1 per 10 sweeps, no data, and no data. (D.C. Arnold).

KANSAS - Numbers of overwintered alfalfa weevil adults swept from alfalfa indicate greater potential for damage by larvae from spring-laid eggs than anticipated. District> County= larvae per sweep and adults per 100 sweeps of alfalfa [average stem length]: SE> Montgomery, Crawford, Labette, Wilson, Elk, Allen, and EC> Anderson= larvae 0-1.3 [15-33 cm] and including Douglas County, adults 0-26 [18-33 cm] (S.C. White); and NE> Riley= no data and adults averaged 7 and 3 in 2 fields [20-23 cm] (K.O. Bell, Jr.). Larvae still light in following fields monitored weekly. District> County= major larval instars, larval averages per stem [average stem length], and percent tips damaged April 9-18: SE> Montgomery= 1st and 3rd, 0.21 [33 cm], and 20% and Crawford= 2nd and 3rd, 0.2 [23 cm], and 12%; EC> Anderson= 1st and 2nd, 0.05 [18 cm], and 4% and Douglas= 1st, 0.05 [15 cm], and 2% (S.C. White); Chase= 1st and 3rd, trace [20 cm], and 10% (B.D. Hilbert); NE> Riley= 0, 0 [20 cm], and 0% (K.O. Bell, Jr.); Doniphan= 1st and 3rd, 0.1 [10 cm], and 0% and Atchison= 1st and 2nd, 0.2 [13 cm], and 6%; SC> Pratt= 1st and 2nd, 0.43 [10 cm], and 21% and a week later, 1st and 3rd, 0.58 [18 cm], and 25% and Sumner= 0, 0 [18 cm], and 1% (G.A. Salisbury); SW> Finney= 1st and 2nd, 0.87 [10 cm], and 5% and Kearny= 1st and 2nd, 0.1 [13 cm], and 1% (M.L. Shuman).

NEBRASKA - District> County= alfalfa weevil counts per 100 sweeps of alfalfa: SE> Otoe= 1st instar larvae 0-4 (averaged less than 1) in 13 fields; no adults. (Stevens). MISSOURI - Area> status: SC> larvae and adults in all fields checked. Small larvae 0-3, light, per forage legume plants, and damage very light. (R.E. Munson). WISCONSIN - District> County= adults swept from alfalfa [5 cm tall]: SC> Rock and Dane= light numbers. (O.L. Lovett).

TENNESSEE - Alfalfa weevil at or above treatable levels in 5 of 12 alfalfa fields. District> County= percent of damage per field based on larvae per 50 stems, unless stated otherwise, week ending April 13: Central Basin> Williamson= 50%, Bedford= 8%, and Davidson= 66%; Western Rim> Montgomery= 142% (71 larvae per 50 stems) and Robertson= 90% and 48% in second field; and West Tennessee> McNairy= 30%, Fayette= 38% and 20%, and Hardeman= 12%, 21%, and 18%. (M. Cooper, J. Locke).

Currently in Tennessee, percent of alfalfa weevil damage based on larvae per 50 tips unless stated otherwise and adults per 100 sweeps per field: Central Basin> Williamson= 112% (56 larvae per 50 tips) and 14, and 80% and 9, Bedford= 24% and no data; West Tennessee> McNairy= 90% and no data, Hardeman= 90% and no data, and Fayette= 90% and no data; Central Basin> Davidson= 72% and 2; Western Rim> Montgomery= 100% and no data; and East Tennessee> Knox= 50% defoliation and no data, and 40% defoliation and no data. (M. Cooper et al.).

INDIANA - Area> alfalfa weevil status. South of U.S. Highway 50> treatment recommended (with persistent insecticide) as early as April 16 in two-thirds of alfalfa except in new fields and vigorous fields with heavy stand week of April 12. Larvae still small and feeding generally hard to see. With rate of infestation and host stage [less than 10 cm] severe damage can occur quickly. Southern one-fourth> 1st and 2nd instar larvae 1.2-3.6 per stem on 28-65% of stems. North of U.S. Highway 50> infestations minor. Current status: South of U.S. Highway 50> some alfalfa treated. Little change except for host growth [mean 15.3 cm], infestation increased from 43% to 62%, eggs laid in green stems in most fields, larvae per stem and larval maturity (mostly 1st and 2nd instars) increased. Some new fields near danger levels. North of U.S. Highway 50> economic in occasional fields, egg laying observed once. District> adults per 25 sweeps of alfalfa: SC> from fewer than 1 to average of 180 (overall average 5.4) and C, EC, and SE> fewer than 2. (R.W. Meyer).

OHIO - First alfalfa weevil larvae of season. District> County= average egg batch, percent stems infested with eggs, larvae per sweep, and adults per sweep: C> Franklin= 3, 3%, 0.02, and no data; WC> Clark= 4, 10%, no data, and 0.12; SW> Warren= 14, 13%, 0.067 per stem (1st instar), 0.01 per sweep (2nd and 3rd instar), and 0.14; and Clinton= 23, 13%, 0.003, and 0.24. (G.P. Walker).

VIRGINIA - Alfalfa weevil surveys based on 5 samples of 10 tips each of forage legumes. Tip infestation 36% and average defoliation 5%. Larvae still too small (average 3.18 mm long) to cause serious damage. District> County= hectares sampled, number infested per 50 tips, percent infestation, and percent defoliation April 12-19: C> Bedford= 3 ha, 12, 24%, and 5%, and 4 ha, 7, 14%, and 4%; Hanover= 6 ha, 8, 16%, and 5%; SW> Montgomery= 7 ha, 22, 44%, and 1%, 6 ha, 33, 66%, and 10%, and 2 ha, 27, 54%, and 10%, and Pulaski= 7 ha, 21, 42%, and 5%, and 16 ha, 12, 24%, and 1%. (L.M. Los et al.).

EGYPTIAN ALFALFA WEEVIL (*Hypera brunneipennis*) - ARIZONA - District> County= larvae and adults per 100 sweeps of alfalfa: C> Pinal= 37 and 112-168. (L.G. Blackledge et al.).

PEA APHID (*Acyrthosiphon pisum*) - NEVADA - Damage evident in heavily infested areas, accurate counts not available due to extremely windy weather. District> County= status on forage legumes week ending April 13: S> Nye= this species and BLUE ALFALFA APHID (*A. kondoi*) heavy on 80+ ha, lighter on hay alfalfa in Pahrump Valley (R.C. Bechtell); currently, mostly pea aphid and blue alfalfa aphid averaged 100+ per sweep on 200+ ha of hay alfalfa in same area. (R. Hammond et al.).

ARIZONA - District> County= pea aphid immatures and adults on alfalfa: C> Maricopa= 30-500 per 100 sweeps and Pinal= 94-1,504 per 100 sweeps; and SW> Yuma= 2,000 per 10 sweeps. (L.G. Blackledge et al.).

BLUE ALFALFA APHID (*Acyrthosiphon kondoi*) - ARIZONA - District> County= adults per 100 sweeps of alfalfa: C> Maricopa= 150-600. (L.G. Blackledge et al.).
OKLAHOMA - First of season. District> County= average per 30 sweeps of alfalfa April 12: C> Grady= 37. (D.C. Arnold).

MEADOW SPITTLEBUG (*Philaenus spumarius*) - INDIANA - First nymph of season. District> County= nymphs on forage Legumes: SC> Harrison= first observed April 7 (V. Parman); Washington and Jackson= trace by April 9-11. (R.W. Meyer).

LYGUS BUGS (*Lygus* spp.) - ARIZONA - District> County= nymphs and adults per 100 sweeps of alfalfa: C> Pinal= 8-12 and 6-128. (L.G. Blackledge et al.).

TARNISHED PLANT BUG (*Lygus lineolaris*) - MISSISSIPPI - District> County= adult averages per 25 sweeps of red and crimson clover: EC> Lowndes and Noxubee= 1.4. (R.E. Anderson).

COTTON

INSECTS

BEET ARMYWORM (*Spodoptera exigua*) - ARIZONA - District> County= larvae per cotton plant: SW> Yuma= 3. (T. McCall, C. Berens).

TOBACCO

INSECTS

TOBACCO BUDWORM (*Heliothis virescens*) - FLORIDA - District> County= larval status on unsprayed tobacco plants: NE> Suwannee= slightly heavier at Live Oak than same time in 1978. (W.B. Tappan).

GRANULATE CUTWORM (*Feltia subterranea*) - FLORIDA - District> County= status on field tobacco: NE> Suwannee= damage 1% at Live Oak. Some controls applied. (W.B. Tappan).

TOBACCO HORNWORM (*Manduca sexta*) - FLORIDA - First egg of season. District> County= egg status on tobacco: NE> Suwannee= 1 egg observed at Live Oak, 2-3 weeks earlier than first egg in 1978. (W.P. Tappan).

GREEN PEACH APHID (*Myzus persicae*) - FLORIDA - District> County= status on tobacco: NE> Suwannee= adults few and immatures very few at Live Oak. (W.B. Tappan).

SUGAR BEETS

INSECTS

SUGARBEET ROOT MAGGOT (*Tetanops myopaeformis*) - OREGON - New county record. County= collection data on sugar beets: Malheur= north of Ontario, May 31, 1978, by P.M. Jolley. Determined by G. Steyskal. (C.C. Blickenstaff, R.L. Stoltz).

POTATOES, TOMATOES, PEPPERS

INSECTS

COLORADO POTATO BEETLE (Leptinotarsa decemlineata) - FLORIDA - District> County= larval and adult status on potatoes: C> St. Johns= scattered colonies in Hastings area, spot treatments applied. (R.B. Workman).

TOMATO PINWORM (Keiferia lycopersicella) - FLORIDA - Currently most serious tomato problem. District> County= status on tomatoes: S> Dade= buildup past 6 weeks continued in Homestead area. (V. Waddill).

VEGETABLE LEAFMINER (Liriomyza sativae) - FLORIDA - District> County= status on tomatoes: C> Hillsborough= increased in Ruskin area, not yet at threshold levels. (D.J. Schuster).

BEANS AND PEAS

INSECTS

PEA LEAF WEEVIL (Sitona lineatus) - IDAHO - Northern area> overwintering populations in perennial Tegume stands much heavier than in 1978, possibly indicating potential status in 1979. District> County= means per sq m in 2-5 locations per area for 1979 (compared to 1978): N> Latah= 50 (16) in Moscow, 361 (12) in Potlatch, and 12 (no data) in Genesee; Nez Perce= 99 (no data) in Coyote Grade; and 106 (17) in Southwick; Lewis= 120 (8) in Nezperce and 452 (72) in Winchester; and Idaho= 162 (42) in Grangeville. (L.E. O'Keeffe).

SOUTHERN GREEN STINK BUG (Nezara viridula) - FLORIDA - Principal stink bug on snap beans. District> County= status: S> Dade= treatment required at Homestead. (R.M. Baranowski).

COLE CROPS

INSECTS

CABBAGE LOOPER (Trichoplusia ni) - FLORIDA - Populations heaviest of season, expected to increase, and peak in May at Hastings. District> County= status: C> St. Johns= built up to threshold levels on cabbage at Hastings, weekly treatments necessary. (R.B. Workman).

DIAMONDBACK MOTH (Plutella xylostella) - FLORIDA - District> County= status on cabbage: C> St. Johns= heaviest in 20-30 years in Hastings area. Controls inadequate. (R.B. Workman).

GENERAL VEGETABLES

INSECTS

CABBAGE LOOPER (Trichoplusia ni) - ARIZONA - District> County= counts per 3.7 row m of lettuce: C> Maricopa= eggs 18-37, larvae 5-9, and adults 6-10. (J. Kirkpatrick, F. Brooks).

SPOTTED ASPARAGUS BEETLE (Crioceris duodecimpunctata) - OREGON - New county record. County= adults from roadside asparagus: Crook= collected at Powell Butte, September 27, 1978. Collected and determined by R.L. Penrose. (R.L. Penrose).

VEGETABLE LEAFMINER (*Liriomyza sativae*) - FLORIDA - District> County= status on celery: S> Palm Beach= hymenopterous parasites effective in Belle Glade area but controls also applied, and heavy in untreated celery (W.G. Genung); Lake and Orange= counts doubling weekly in Lake Jem area (C.A. Musgrave).

DECIDUOUS FRUITS AND NUTS

INSECTS

SPRING CANKERWORM (*Paleacrita vernata*) - KANSAS - First larvae of season. District> County= status: NE> Riley, SE> Montgomery, and SC> Comanche=light, larvae hatching; Comanche= heavy on wild plum at 1 location. (G.A. Salsbury et al.).

EUROPEAN RED MITE (*Panonychus ulmi*) - OREGON - Some egg hatch underway. County= egg counts on prune: Washington= very heavy concentration on twigs in Hillsboro area. (J. Mellott). OHIO - Eggs on apples heavier on Red Delicious spur variety than on Golden Delicious. District> County= eggs per 10 cm of terminal in apple orchard: C> Franklin= averaged 100+, average of 26% preyed upon. (G.P. Walker).

CITRUS

INSECTS

WESTERN FLOWER THrips (*Frankliniella occidentalis*) - ARIZONA - District> County= status on citrus: C> Pinal= populations very heavy and Maricopa= adults 15-25 per flower and SW> Yuma= controls applied. (F. Brooks et al.).

ORNAMENTALS

INSECTS

A MEALYBUG (*Rhizoecus simplex*) - FLORIDA - New county record. District> County= adults from ornamental cactus: C> Clay= collected in nursery at Middleburg, August 3, 1978, by C.B. Lieberman. Determined by A.B. Hamon. Host in locality since 1977. (F.W. Mead).

FOREST AND SHADE TREES

DISEASES

PINE WOOD NEMATODE (*Bursaphelenchus lignicolus* Mamiya & Kiyohara) - MISSOURI - New Western Hemisphere record. District> County= collection data: Central> Boone= specimens from dead 40-year-old *Pinus nigra* (Austrian pine) tree at residence at Columbia by A. Foudin, April 10, 1979. Determined by V. Dropkin; confirmed by Y. Mamiya and W. Friedman. Nearby infected tree, *Pinus sylvestris* (Scotch pine), determined by A. Foudin. Delimiting surveys planned statewide. (A. Foudin). This aphelenchoid nematode is known from France and Japan. In certain areas of Japan, the disease is a severe problem on *Pinus thunbergiana* (Japanese black pine), *Pinus densiflora* (Japanese red pine), and *Pinus luchuensis*. This nematode, transmitted by several species of cerambycid beetles, infects the resin canals of pine trees. Wilted and yellowed foliage is followed by death of the tree in a few months. (Y. Mamiya, 1976, Japan Agric. Res. Q. 10(4):206-211).

INSECTS

EASTERN TENT CATERPILLAR (Malacosoma americanum) - MISSOURI - First larvae of season. Area> status on forest and shade trees: SW> first observed April 12 and SC> larvae and small tents throughout area. (R.E. Munson).

MAN AND ANIMALS

INSECTS

HORN FLY (Haematobia irritans) - MISSISSIPPI - District> County= adults on cattle: Upper Delta> Tallahatchie= 25-100+. (J. Townsend).

AMERICAN DOG TICK (Dermacentor variabilis) - OKLAHOMA - First of season. District> County= status: C> Payne= replete female on dog at Stillwater, NC> Noble= pair on cat, April 9, and SW> Jackson= specimen on dog at Altus, April 11. (D.C. Arnold). MINNESOTA - First of season. District> County= status: EC> Washington= collected from cat near Stillwater. (D.D. Sreenivasam).

HOUSEHOLDS AND STRUCTURES

INSECTS

EASTERN SUBTERRANEAN TERMITE (Reticulitermes flavipes) - VIRGINIA - First swarms of season. District> County= swarm dates: N> Arlington= March 31; SW> Wythe= April 3; and SE> Virginia Beach City= March 30. (J.L. Garner).

BENEFICIAL ORGANISMS & THEIR ENEMIES

INSECTS

AN ICHNEUMONID WASP (Bathyplectes anurus) - INDIANA - First adults of season. District> County= males per 25 sweeps in alfalfa fields: SC> Washington= 2, April 10. (R.W. Meyer).

FEDERAL AND STATE PROGRAMS

INSECTS

CEREAL LEAF BEETLE (Oulema melanopus) - NORTH CAROLINA - Adults feeding and probably laying eggs in small grain fields April 2-12. Parasite program planned. District> County= counties with infested small grains, sites sampled per county, and sites infested per county: Northern Coastal> Northampton westward to Central Piedmont> Randolph and southward to Lee= 15 of 23, 1-10 (average 4.39), and 0-6 (average 1.78). (R. Galloway).

OHIO - First cereal leaf beetle adults of season. Eggs and larval feeding expected soon. District> County= adults per sweep in wheat: SW> Clinton= none in 1 field [15 cm tall], 0.01 in lush weedy margin and 0.01 and 0.07 in 2 taller fields [30-33 cm tall]; C> Union and Madison; SW> Greene; and WC> Clark= none. (G.P. Walker).

GRASSHOPPERS - NEW MEXICO - District> County= status week ending April 6: SE> Lincoln= mostly 3rd and 4th instar Eritettix sp. and Psoloessa sp. nymphs 5-7 per 0.8 sq m on about 20,000 ha of rangeland northwest of Encinoso (M. Perry) and SW> Hidalgo= 1st and 2nd instars averaged 0-2 per 0.8 sq m south of Animas, hatch incomplete (F. Smith), egg pods, probably Schistocerca sp. and

Melanoplus differentialis, 3-5 per 0.09 sq m in localized sandy areas along Pecos River bank, 8 km south of Artesia (M. Perry, L. Gholson).

JAPANESE BEETLE (Popillia japonica) - OHIO - Larvae active, fed on roots of turf grass. District> County= Larvae in 31 samples (18 x 18 cm) of turf grass: C> Franklin= 92 from golf course, density ranged 0-21 per 0.09 sq m. (P. Turner).

SCREWWORM (Cochliomyia hominivorax) - No cases reported from continental United States, March 25-31. Number of sterile flies released this period totaled 41,822,320 as follows: Texas 18,432,720; New Mexico 5,040,000; Arizona 18,214,600; California 135,000. Total of 157,908,880 sterile flies released within Barrier of Mexico. (J.E. Novy, M.E. Meadows).

HAWAII PEST REPORT

Ornamentals and Shade Trees - Recent surveys for a WHITEFLY (Aleurodicus dispersus) generally showed a decrease in cooler and wetter highlands and valleys and an increase and more even dispersal in warmer and drier lowland and coastal areas of central Honolulu, Oahu, as compared to fall 1978. Heavy sporadic rains and abnormally cool temperatures during the past winter apparently contributed to a reduced dispersal rate and reduced increase. Pests still generally confined to localities reported 5 months earlier in central Honolulu area. Recent surveys revealed new infestations only at Moanalua (known only to occur on Oahu in the State thus far). Current infestations heavy on sea grape, true kamani, and guava at Honolulu. True kamani trees especially unsightly due to this species and a PSYLLID (Leptynoptera sulfurea). Besides malformed terminal leaves caused by the psyllid, both species produced large amounts of honeydew which developed into sooty mold problems. Infestations light to moderate on other shade and ornamental trees, such as false kamani and certain species of plumeria, which shed their leaves during winter. Numerous newly deposited eggs on false kamani, indicated increase expected as conditions become more favorable. Surveys for natural enemies in infested areas showed trace signs of parasitism (parasite exit hole in whitefly pupae) on sea grape by unknown species of wasp collected in Nuuanu. (L.M. Nakahara et al.).

General Vegetables - Heavy populations of LEAFMINER FLIES (Liriomyza spp.) caused moderate foliar damage to 1.6 ha of tomato near sea level at Kihei, Maui. (N. Miyahira).

Alfalfa - PEA APHID (Acyrtosiphon pisum) adults and nymphs, 51.0 per 10 sweeps of 3-week-old alfalfa, in survey of 9.7 ha at Laie, Oahu, March 30; foliar damage trace. (L.M. Nakahara et al.).

DETECTION

NEW WESTERN HEMISPHERE RECORDS

DISEASES

PINE WOOD NEMATODE (Bursaphelenchus lignicolus Mamiya & Kiyohara) - MISSOURI - Boone County. (p. 207).

INSECTS

A CHRYSOMELID BEETLE (Psylliodes picina (Marsham)) - PENNSYLVANIA - Bradford County. (p. 202).

NEW COUNTY RECORDS

INSECTS

A MEALYBUG (Rhizoecus simplex) - FLORIDA - Clay. (p. 207).

SPOTTED ASPARAGUS BEETLE (Crioceris duodecimpunctata) - OREGON - Crook. (p. 206).

SUGARBEET ROOT MAGGOT (Tetanops myopaeformis) - OREGON - Malheur. (p. 205).

CORRECTIONS

CPPR 4(9):91 - A SOFT SCALE - NORTH DAKOTA - "... owned lot at Bismarck, May 3, 1974, ..." should read "... owned lot at Bismarck, May 3, 1978, ..." (C.G. Scholl).

LIGHT TRAP COLLECTIONS

State	City	Date	Type of Trap	Precipitation in mm	Temperature in °F	Altitude in meters	Notes
ARIZONA	Mesa	4/9-15	BL	20			
FLORIDA	Gainesville	4/12-18	BL				
KANSAS	Haviland	4/13-17	BL	25	0	8	
	Rossville	4/16-17	BL	4	0	0	
MISSISSIPPI	Stoneville	4/13-19	9.4-28	1.0	2BL	47	15
OHIO (County)	Wayne	4/12-18	3BL			3	
TENNESSEE	Selmer	4/14-20	BL				
	Springhill	4/14-20	BL				
TEXAS	College Station	4/12-18	BL	0	0	0	

Pest Interceptions of Quarantine Significance at Ports of Entry

Plant Importation and Technical Support Staff
Plant Protection and Quarantine Programs, USDA

	<u>Life Stage</u>	<u>Host</u>	<u>Probable Origin</u>	<u>Port of Entry</u>	<u>Desti-nation</u>
<u><i>Ancognatha scarabaeoides</i></u> Burmeister a scarab Det. R.P. Higgins	adult	on stems of <u><i>Chrysanthemum</i></u> from cargo	Colombia	Miami	FL
<u><i>Ancylolomia palpella</i></u> (D&S.) a pyralid moth Det. D.C. Ferguson	adult	in quarters of aircraft	Morocco	Kennedy Airport	NY
<u><i>Aspidiella hartii</i></u> (Cockerell) a diaspisid scale Det. S. Nakahara	adult	on roots of <u><i>Zingiber</i></u> from cargo	Fiji	Los Angeles	CA
<u><i>Ceratitis capitata</i></u> (Wiedemann) Mediterranean fruit fly Det. R.P. Higgins	larval	in mangoes from baggage	Argentina	Miami	FL
<u><i>Saperda carcharias</i></u> (Linnaeus) a cerambycid beetle Det. E.J. Ford, Jr. Det. S. Nakahara	larval	in wood cases with forgings	Italy	Baltimore	Canada
<u><i>Thoracaphis fici</i></u> (Takahashi) banyan aphid Det. S. Nakahara	adult	on leaves of <u><i>Ficus</i></u> plants from cargo	Republic of China	Los Angeles	CA
<u><i>Achatina achatina</i></u> Linnaeus an achatinid snail Det. D.M. Odermatt	adult	in passenger baggage	Africa	Kennedy Airport	LA
<u><i>Helicella caperata</i></u> (Montagu) a helicid snail Det. R. Munkittrick	adult	on vans of military household goods	Greece	Houston	TX

SUMMARY OF PEST CONDITIONS IN THE UNITED STATES - 1978

(Continued from page 193)

POTATOES, TOMATOES, PEPPERS

DISEASES

TOMATO WILT (Fusarium oxysporum f.sp. lycopersici) levels were light to moderate in tomato fields from July through September at various locations in Dona Ana County, NEW MEXICO.

POTATO LEAF ROLL VIRUS - See GREEN PEACH APHID (Myzus persicae) below.

INSECTS

Population levels of COLORADO POTATO BEETLE (Leptinotarsa decemlineata) in OREGON were heavy for the second consecutive year in backyard and commercial potato plantings in Umatilla, Morrow, and Malheur Counties. Adults emerged in mid-April at Hermiston; in late May in the Nyssa and Ontario areas. Large numbers of adults and larvae defoliated virtually all unsprayed gardens at Hermiston by late May. Second generation adults emerged in early July and severely damaged garden tomatoes. Commercial fields were under heavy pressure in both areas and sporadic heavy defoliation occurred in untreated fields.

Colorado potato beetle populations in eastern WASHINGTON increased rapidly early in the growing season. Fields not treated with a systemic insecticide as a side dress or at planting were damaged. Late fall populations appeared to have been heavier than normal.

Colorado potato beetle in OKLAHOMA was reported on home garden potatoes from mid-April to the end of June. Moderate to heavy numbers were present, as usual, in many areas.

First generation adults of Colorado potato beetle were unusually active on potatoes in the northern districts of INDIANA, and on tomatoes and potatoes in the southern districts.

Adult emergence and feeding by Colorado potato beetle began the week ending April 28 on Long Island, NEW YORK. Adults were heavy on solanaceous crops in the Capital district and more egg masses than normal were observed on potatoes in Suffolk County by June 29. Larval populations were heavy in Capital district by July 14 and defoliation of eggplant fields was observed in Albany County by July 28.

SWEETPOTATO WEEVIL (Cylas formicarius elegantulus) continued to be the most important insect pest of the white-fleshed potatoes grown in Dade County, FLORIDA.

MARGINED BLISTER BEETLE (Epicauta pestifera) was reported in early August as a new pest affecting garden potatoes in Suffolk County, NEW YORK.

BEET ARMYWORM (Spodoptera exigua) was present early in the fall tomato crops in the Palmetto and Ruskin areas of FLORIDA. Although foliar damage was commonly observed in treated fields, additional treatments with other chemicals were not warranted since the threshold of 1 larva per 6 plants was not exceeded. The

major concern of pepper growers in the Palmetto area during 1978 was noctuid larvae, principally beet armyworm and FALL ARMYWORM (*S. frugiperda*). Up to 60% of the first harvest from nontreated peppers in the field was damaged by beet armyworm.

The first beet armyworm of the season in a blacklight trap was taken July 8 on Long Island, NEW YORK. Four adults were taken in an Ontario County blacklight trap August 11-14, the only reported field station trap catch in the Upstate region this season. The adult catch in blacklight traps on Long Island averaged 2,000 adults per trap station the week ending September 8. Larval infestations on Long Island potatoes this season were very heavy.

SOUTHERN ARMYWORM (*Spodoptera eridania*) remained the primary armyworm species on FLORIDA tomatoes. It was present in both the spring and fall seasons and required control measures. Up to an average of 29 larvae per plant were observed on nontreated tomatoes in the fall crop.

TOMATO FRUITWORM (*Heliothis zea*) in FLORIDA is not normally a pest of tomatoes in Dade County, but numbers on fall tomatoes required treatments during October to November. The reason for this unusual occurrence is not known. In the Palmetto and Ruskin areas, populations increased during 1978, possibly because many growers changed chemicals to control larvae.

CABBAGE LOOPER (*Trichoplusia ni*) in FLORIDA was common during spring and fall on the foliage of tomato plants. Although fruit damage was uncommon, 66 larvae per 5 plants were observed on nontreated plants in the spring in the Immokalee area.

In late May much of the field corn in WISCONSIN was too immature for EUROPEAN CORN BORER (*Ostrinia nubilalis*) survival; therefore, many early emerging adults laid their eggs on potato vines and alternate hosts. Treatment prevented significant damage.

European corn borer larvae in KENTUCKY were much less of a problem to peppers than in 1977. Only about 25% of the commercial pepper acreage was treated with foliar insecticides compared with nearly 50% in 1977. The heavy rains at various times during August were probably responsible for reducing population levels in many fields by washing off egg masses and small larvae. First European corn borer egg masses in DELAWARE on peppers occurred during the week of July 22, much later than in most years. Larval infestations in fruit averaged 23% in late August and about 50% from mid-September in untreated peppers.

Heavy TOMATO PINWORM (*Keiferia lycopersicella*) infestations in OKLAHOMA were present on home garden tomatoes in Payne County from late August to mid-October.

Tomato pinworm developed somewhat later than normal on tomatoes in Dade County, FLORIDA. Buildup was noted in March instead of the usual January to February months. Adequate control was maintained. In the Palmetto and Ruskin areas, Manatee and Hillsborough Counties, tomato pinworm was not a major concern.

In the Immokalee area, Collier County, tomato pinworm was a major concern in the spring crop. About 52-53% of the fruit from plants sprayed were damaged compared to 70% from nontreated plants.

First adult of season for TOMATO HORNWORM (*Manduca quinquemaculata*) in black-light trap in Ontario County, NEW YORK, was taken July 2. Nearly full-grown larvae were observed by July 26 on Suffolk County tomatoes. Extensive damage to tomato fields was observed August 8 in Chautauqua County. Serious defoliation of potato fields in Columbia County was reported the week ending September 2. Infestations of home and commercial plantings appeared to be greater than normal this season.

VEGETABLE LEAFMINER (*Liriomyza sativae*) populations remained light on the spring crop of tomatoes in Dade County, FLORIDA, probably due to cold weather. However, heavy populations developed during November (50 mines per terminal trifoliolate).

Abundant volunteer potatoes in Malheur County, OREGON, production areas provided a good reservoir for POTATO LEAF ROLL VIRUS and early season hosts for GREEN PEACH APHID (*Myzus persicae*). Alates on these plants by mid-May moved into commercial plantings by early June. Aphids were sporadically abundant in the Oregon Slope, Cairo and Nyssa and Adrian areas by June 21. Heaviest flights occurred in early July with catches falling from 8 per trap per day to 2 per trap per day by midmonth. Movement was light in August. Potato leaf roll problems were observed in fields not using systemic pesticides.

A program in IDAHO to control green peach aphid on its overwintering hosts was continued in the south-central and southeastern areas. The program included increasing inspection of bedding plants in all areas and treating peach and apricot trees in the southeastern area with soil systemics. Numbers caught in trap pans decreased sharply from levels in 1977. Field populations in south-central area were the same as in 1977. Populations reached the highest numbers in the last 7 years in spots of southeastern areas. Southwestern Idaho had normal populations.

Normal populations of green peach aphid occurred on potatoes in Dade County, FLORIDA (15-25 aphids per lower leaf in untreated plots). Spring populations were light on potato plants at Hastings. Green peach aphid in DELAWARE infested peppers and potatoes in Kent and Sussex Counties during late June and became heavy during late August and September on some peppers.

The first migrants of POTATO LEAFHOPPER (*Emoasca fabae*) were found on potatoes in Waushara County, WISCONSIN, on June 7.

BEANS AND PEAS

DISEASES

Gamma strain of BEAN ANTHRACNOSE (*Colletotrichum lindemuthianum*) on dry beans was detected for the first time in MICHIGAN (see CPPR 3(40-41):575). Michigan cultivars have good resistance against the gamma strain.

Severe symptoms of BEAN COMMON MOSAIC VIRUS on dry beans were widely distributed in MICHIGAN on susceptible cultivars of Black Turtle Soup, Charlevoix (dark red kidney), Manitou (light red kidney, and cranberry beans). Whereas resistant cultivars such as Tuscola, Gratin, Sanilac, and Seafarer developed 'black root' symptoms. Black root and mosaic symptoms were observed mainly in Bay, Tuscola, and Saginaw Counties. Most bean seed is imported. Greenhouse tests indicated 34-35% seed transmission of the virus in seed from out-of-State seed.

INSECTS

MEXICAN BEAN BEETLE (*Epilachna varivestis*) programs in IDAHO were continued to keep this beetle from spreading from Boise to commercial bean fields. Infestations found in 509 of 5,195 gardens were treated. An attempt at releasing parasites was ineffective because of timing. No beetles were found at Caldwell or Eagle. No infestations were found in 1,886 home gardens in the south-central area. Plans for 1979 will include expansion of treated areas and increased parasite release programs.

Mexican bean beetle adults averaged 250 per 0.4 ha (acre) in Chesapeake County, VIRGINIA, on June 12. Egg masses were present but larvae did not appear until June 22. In Northampton County, 1 field of commercial snap beans had a moderate infestation of 3rd and 4th instar larvae on June 27. By September 1, populations were building up in northern Westmoreland County. Parasites were not established in this part of the county and damage exceeded the threshold in many fields. In the following few weeks, fields were randomly sampled in several soybean counties in the eastern area to determine the level of the parasite and Mexican bean beetle. By September 15, Mexican bean beetle populations continued to be light in most areas. A survey of counties in the southeastern extension district showed only 7 of 40 infested fields had measurable populations of Mexican bean beetle. Populations continued to be light in the Southern Coastal Plain. On October 6, populations continued to be very light. Significant damage was reported only in Westmoreland County. An end-of-season survey showed that about 25% of the soybean fields in the southeastern extension district were infested with subeconomic infestations. The remaining 75% of the fields surveyed had no detectable populations. Populations of Mexican bean beetle were lighter in 1978 than at any time since the mid 1960's.

Overwintering PEA LEAF WEEVIL (*Sitona lineatus*) populations in IDAHO greatly decreased because of drought in the pea crop. Damage was only slight and spotted in a few areas that were serious enough to require treatment.

In late May much of the field corn in WISCONSIN was too immature for EUROPEAN CORN BORER (*Ostrinia nubilalis*) survival; therefore, many early emerging adults laid their eggs on potato vines and alternate hosts. Significant damage was prevented by treatment. The second flight of adults which began in late July in southern Wisconsin was very heavy and persisted until mid-September. Heavy larval infestations of European corn borer caused the bypassing of 768.9 ha (1,900 acres) of snap beans in the Central Sands and some acreage in the northwest. Most of the bypassed snap bean acreage had been treated on a regular schedule.

Snap beans were treated an average of 4 times per field throughout MARYLAND because of European corn borer pressure, with some treating through October 1 because of an unusual third generation.

Heavy populations of ALFALFA LOOPER (*Autographa californica*) fed on a wide variety of eastern OREGON legumes. Green field peas in northeastern production areas were particularly hard hit. Several thousand acres in Umatilla and Union Counties were treated in June. Heavy vine growth in early planted fields made control particularly difficult. Umatilla County snap and lima beans also supported economic numbers.

WESTERN BEAN CUTWORM (*Loxagrotis albicosta*) adults in light traps in IDAHO were considerably heavier than in 1977. The heaviest counts recorded in the south-central area of the State were in 1977. About 80% of the bean acreage was treated 8-18 days after the peak adult flight. This held larval damage down considerably from 1977.

Spring numbers of PEA APHID (*Acyrtosiphon pisum*) in OREGON were heavy in Willamette Valley pea fields. Infestations ranged 500-700 per 25 sweeps in one Marion County planting, June 1. Populations in IDAHO decreased on peas in the southeastern and south-central areas. In the northern area, populations required treatment or caused plant wilt and death in most areas. This is the first time this pest has become so heavy since the release of *Aphidius smithi* (an aphidiid wasp) in the northern area.

COLE CROPS

INSECTS

IMPORTED CABBAGEWORM (*Pieris rapae*) damage was moderate in the spring and fall to crucifers in the Hastings area of FLORIDA; counts reached as high as 11 per plant in untreated spring cabbage.

Imported cabbageworm and CABBAGE LOOPER (*Trichoplusia ni*) caused heavy damage to home garden and commercial cabbage in 1978 in WISCONSIN, especially cabbage looper. In many instances the spray schedules for commercial cabbage could not be maintained because of frequent rains. Pheromone traps were not effective for monitoring adult flights in the 1978 growing season. Cabbage looper damage was the heaviest in several years.

CABBAGE LOOPER (*Trichoplusia ni*) remained the most important pest of cabbage in the Bradenton area, Manatee County, FLORIDA, with only an average 12.5% of the nontreated heads being marketable in the spring. Nontreated collard plants were heavily damaged; larvae averaged 59.8 per 5 plants in the spring. In the Hastings area, St. Johns County, damage was very heavy on untreated cabbage, collards, and other crucifers during spring and fall, with counts of 4-50 per plant being made.

Cabbage looper larvae in NEW YORK were found in 2 Monroe County cabbage fields in May, both planted with southern transplants. First of season blacklight trap catch occurred on Long Island June 29 and the week ending July 14 Upstate. First of season larval activity (other than on transplants) on western area cabbage was reported July 6 in Orleans County. Egg laying Upstate occurred initially in mid-June and continued to increase through early August, at which time it began to decline. Larvae peaked in late August at an average of 2 larvae per plant in a weekly scouting program conducted on 23 sites over a 5-county area. Fall larval activity was significantly less than late summer activity.

Cabbage looper caused extensive damage to cabbage in southeastern NEW HAMPSHIRE in 1978. In Stratham, Rockingham County, 25% of the plants had 100% of the leaves damaged and counts ranged 9-43 larvae per plant. In fields where leaf damage reached 100%, only 25% of the cabbage heads were marketable.

BEET ARMYWORM (*Spodoptera exigua*), CABBAGE LOOPER (*Trichoplusia ni*), and NOCTUID MOTHS (*Heliothis* spp.) in ARIZONA required controls on 526.1 ha (1,300 acres) of cauliflower and 304 ha (750 acres) of broccoli. A total of 6-7 applications of pesticides was necessary to control these pests. No crop damage

occurred, but cost of control for beet armyworm was much higher than in 1977. These insects began showing up in broccoli and cauliflower in early September. Counts were 1-4 larvae and 1-5 eggs per plant in September. Yuma had the heaviest counts with some fields 60% infested.

Beet armyworm became a problem in FLORIDA during spring on cabbage and other crucifers for the first time in years in the Hastings area; controls were very difficult.

LESSER CORNSTALK BORER (*Elasmopalpus lignosellus*) tunneled stems in the fall on cabbage transplanted to fields at Hastings, FLORIDA. Damage was light to moderate. These larvae were a problem for the first time in several years.

CABBAGE WEBWORM (*Hellula rogatalis*) populations in FLORIDA during the fall were moderate on cabbage in the Hastings area, the heaviest in several years.

DIAMONDBACK MOTH (*Plutella xylostella*) in FLORIDA caused very heavy damage during spring and fall on cabbage and other crucifers in the Hastings area. Heaviest fall numbers (October to December) in years were observed (1-70 larvae per plant); growers reported clouds of adults in the fields; possibly 400 ha (1,000 acres) were involved; some cabbage fields were abandoned, one of which was 24 ha (60 acres) in size; controls were difficult.

Larvae of diamondback moth were observed by late May in over 50% of the cabbage fields scouted in 5 western counties of NEW YORK. Larval activity peaked in late July with an average of 1 and a maximum of 5 larvae per plant. Infestations had significantly declined by early September. Field infestations encountered in 1978 represented above normal activity.

CABBAGE SEEDPOD WEEVIL (*Ceutorhynchus assimilis*) in IDAHO ranged 10-100 per sweep in the northern area. Treatments properly timed increased yields by one-third.

Numbers of a CHRYSOMELID BEETLE (*Phyllotreta cruciferae*) escalated slightly on broccoli this spring in the Willamette Valley of OREGON. April and May surveys of many small fields in Washington and Clackamas Counties recorded levels as heavy as 10 adults per 50 plants. Significant damage to some fields was reported.

CABBAGE MAGGOT (*Hylemya brassicae*) adults were heavy in baited traps in Racine and Kenosha Counties, WISCONSIN, beginning in mid-May with the peak flight in early June. Treatment was recommended for all early cabbage in this area. Populations in 1978 were the heaviest in 3 years.

Cabbage maggot adults were active in radish and cabbage fields in Suffolk County, NEW YORK, the week ending April 28. Adults were taken in cone traps May 17-18 in Ontario County. Eggs were reported on 2-5% of the plants in the Lake Erie region by May 16. Significant damage in Hudson Valley radish plots was reported by the week ending May 27. Feeding was observed June 1 in Monroe County cabbage. Adult catch in cone traps in 5 western counties increased 4 fold from June 29 to July 7. Significant increase in egg-laying activity became noticeable along with adult activity measured by cone traps.

CUCURBITS

DISEASES

Light to moderate wilt levels of CUCURBIT ROOT ROT (*Fusarium solani* f.sp. *cucurbitae*) were found in squash fields from July through September at various locations in Dona Ana County, NEW MEXICO.

CUCURBIT BACTERIAL WILT (*Erwinia tracheiphila*) was active on cucumber and cantaloupe in parts of northwestern and northeastern KANSAS. Severe damage occurred on several farms near Kansas City.

INSECTS

MELONWORM (*Diaphania hyalinata*) in FLORIDA was not present in damaging numbers in the spring; however, up to 10 larvae per 5 runners were observed on non-treated cantaloupes in the fall.

PICKLEWORM (*Diaphania nitidalis*) populations in squash in fall plantings were not as high as in the fall of 1977, but about 50% of the squash unprotected by sprays was damaged in the Leesburg area, Lake County, FLORIDA. In the Bradenton area pickleworm was present during spring and fall with up to 15% of the cucumber fruit on nontreated plants being damaged in the spring and up to 100% of the cantaloupe fruit damaged in the fall.

GENERAL VEGETABLES

DISEASES

A WHITE RUST (*Albugo occidentalis*) was a limiting factor in the 1978 spinach crop in southeastern KANSAS in the spring before the dry summer conditions were encountered.

INSECTS

BEET ARMYWORM (*Spodoptera exigua*), CABBAGE LOOPER (*Trichoplusia ni*), and NOCTUID MOTHS (*Heliothis* spp.) in ARIZONA required controls on 15,783 ha of lettuce. A total of 6-7 applications was necessary. No crop damage occurred but control costs were much higher than in 1977. These species appeared in early September. Yuma had the heaviest counts with 60% infestations in some fields.

ONION MAGGOT (*Hylemya antiqua*) adult activity in NEW YORK was observed in Orange County the week ending May 5. Larvae were heavy in Oswego County muck onion plantings June 20. By June 26 about 80% of the population had pupated. Second brood adults became active in Hudson Valley the week ending July 28. Adult activity in the central area was heavier than normal.

VEGETABLE LEAFMINER (*Liriomyza sativae*) decreased overall in Belle Glade and Apopka, FLORIDA, on celery, apparently due to more judicious use of insecticides and better control by parasites. Infestations were light on vegetables in SOUTH CAROLINA. Reduced pesticide applications allowed beneficial insects to increase and aid in control.

GREEN PEACH APHID (*Myzus persicae*) infestations in WASHINGTON were heavy on most seed beets and about 50% of the spinach seed fields in the western area. Levels of 25-100 aphids per 10 cm of seed stem were common in unsprayed beet fields and 10-50 per leaf in spinach fields.

New Geographical Distribution Records for Forty-Four Species and Subspecies
of Tabanids in West Virginia

(Diptera: Tabanidae)

J. Douglas Hacker¹, L. Butler², and L.L. Pechuman³

Three new State records and 133 new county records involving 44 species and subspecies of tabanids are listed for West Virginia. These data update the records previously given by Drees (1976).

State records, indicated by an asterisk (*), include Chrysops beameri Brennan,
Chrysops celatus Pechuman, and Tabanus cymatophorus Osten Sacken.

The range of Chrysops beameri in the east is from Florida at least to New Jersey and it is found west to Texas and Kansas.

C. celatus ranges from Florida and Texas north to Massachusetts, southern Michigan, and southern Ontario.

The nearest locality record for T. cymatophorus is from 1 specimen collected in Montgomery County, Maryland. Additional records also exist for North Carolina, Kentucky, Tennessee, extreme southern Illinois, and several southern States. This species has not been recorded from Virginia in spite of extensive collecting work there in recent years.

All specimens collected by C. Coffman, K. Elrod, J. Hacker, K. Hinckley, W. Northeimer, and P. VanBuskirk are housed in the West Virginia Department of Agriculture collection and were determined by L.L. Pechuman. Specimens collected by J. Amrine, R. Barrat, L. Butler, R. DeHaven, R. Dunst, T. Keeney, R. Lindsey, G. Lippert, C. Mason, B. Nierwienski, J. Vandevender, and by an unknown collector are held in the West Virginia University collection. Tabanids collected by J.W. Begley were retained by Begley. Larvae collected by H. Teskey were retained by Teskey.

Abbreviations for Collectors and Determiners .

JWA, James W. Amrine, Jr.; LB, Linda Butler; CCC, Charles C. Coffman; JDH,
J. Douglas Hacker; LLP, L.L. Pechuman; PVB, Philip VanBuskirk.

1/ Survey Entomologist, West Virginia Department of Agriculture, Plant Pest Control Division, Charleston, West Virginia 25305.

2/ Professor of Entomology, Division of Plant Sciences, West Virginia University, Morgantown, West Virginia 26506.

3/ Professor of Entomology, Department of Entomology, Cornell University, Ithaca, New York 14853.

Chrysops ater Macquart. Sinks of Gandy, Randolph County, Coll. JWA, Det. JWA, June 1, 1977.

Chrysops beameri Brennan*. McClintic Wildlife Station, Mason County, Coll. JDH, Det. LLP, July 7, 1977. Three females were netted above a human.

Chrysops callidus Osten Sacken. Greenland Gap, Grant County, Coll. JWA, Det. JWA, May 24, 1977; Sutton Lake, Braxton County, Coll. LB, Det. LB, June 3, 1977; Rainelle, Fayette County, Coll. T. Keeney, Det. LB, July 29, 1977; Cedar Lake State Park, Gilmer County, Coll. LB, Det. LB, June 4, 1977; Bens Run, Pleasants County, Coll. JDH, Det. LLP, May 25, 1977; Burches Run Lake, Marshall County, Coll. JDH, Det. LLP, May 25, 1977; Parsley, Tyler County, Coll. JDH, Det. LLP, May 25, 1977; Shannondale, Jefferson County, Coll. JDH, Det. LLP, May 25, 1977; Brandywine Lake, Pendleton County, Coll. LB, Det. LB, July 22, 1977.

Chrysops calvus Pechuman and Teskey. Dolly Sods, Tucker County, Coll. JWA, Det. JWA, May 21, 1977; Pineville, Wyoming County, Coll. LB, Det. LB, May 20, 1977.

Chrysops carbonarius Walker. Deer Creek and Route 28, Pocahontas County, Coll. JWA, Det. JWA, June 1, 1977; Sinks of Gandy, Randolph County, Coll. JWA, Det. JWA, June 1, 1977; Shannondale, Jefferson County, Coll. JDH, Det. LLP, June 1, 1977.

Chrysops celatus Pechuman*. Bluestone Lake, Summers County, Coll. JWA, Det. LLP, June 2, 1977.

Chrysops cincticornis cincticornis Walker. Pleasants Creek, Barbour County, Coll. JWA, Det. JWA, April 23, 1977; Scherr, Grant County, Coll. LB, Det. LB, May 24, 1977; Panther State Forest, McDowell County, Coll. LB, Det. LB, May 21, 1977; Joe's Run, Monongalia County, Coll. JWA, Det. JWA, May 20, 1977; Bear Rock Lakes, Ohio County, Coll. JDH, Det. LLP, May 25, 1977; Waverly, Wood County, Coll. JDH, Det. LLP, May 25, 1977; Shannondale, Jefferson County, Coll. JDH, Det. LLP, June 1, 1977.

Chrysops cuclux Whitney. Joe's Run, Monongalia County, Coll. JWA, Det. JWA, May 20, 1977; Dolly Sods, Tucker County, Coll. JWA, Det. JWA, May 21, 1977; Burches Run Lake, Marshall County, Coll. JDH, Det. LLP, May 25, 1977.

Chrysops flavidus Wiedemann. Jacksons Mill, Lewis County, Coll. JDH, Det. LLP, July 26, 1977; Tucker County, Coll. B. Nierwienski, Det. LB, August 28, 1977.

Chrysops impunctus Krober. Panther State Forest, McDowell County, Coll. LB, Det. LB, July 10, 1977; Chestnut Ridge, Monongalia County, Coll. JWA, Det. JWA, July 15, 1977.

Chrysops indus Osten Sacken. Pleasant Creek, Barbour County, Coll. LB, Det. LB, May 12, 1977; Scherr, Grant County, Coll. LB, Det. LB, May 24, 1977; Sinks of Gandy, Randolph County, Coll. JWA, Det. JWA, June 1, 1977; Bear Rock Lakes, Ohio County, Coll. JDH, Det. LLP, May 25, 1977; Burches Run Lake, Marshall County, Coll. JDH, Det. LLP, May 25, 1977.

Chrysops macquarti Philip. Sutton Lake, Braxton County, Coll. LB, Det. LB, June 3, 1977; Fort Seybert, Pendleton County, Coll. W. Northeimer and K. Elrod, Det. LLP, July 15, 1976; Bear Rock Lakes, Ohio County, Coll. JDH, Det. LLP, May 25, 1977; Pipestem Lake, Summers County, Coll. JDH, Det. LLP,

June 28, 1977; McClintic Wildlife Station, Mason County, Coll. JDH, Det. LLP, July 7, 1977.

Chrysops moechus Osten Sacken. Cabwaylingo State Forest, Wayne County, Coll. LB, Det. LB, May 21, 1977; Cedar Creek State Park, Gilmer County, Coll. LB, Det. LB, June 4, 1977; Jacksons Mill, Lewis County, Coll. JDH, Det. LLP, July 27, 1977; North Bend State Park, Ritchie County, Coll. LB, Det. LB, June 23, 1977; Clifton Mills, Preston County, Coll. JWA, Det. JWA, June 24, 1977.

Chrysops niger Macquart. Pleasant Creek, Barbour County, Coll. LB, Det. LB, May 12, 1977; Scherr, Grant County, Coll. LB, Det. LB, May 24, 1977; Parsley, Tyler County, Coll. JDH, Det. LLP, May 25, 1977; Bens Run, Pleasants County, Coll. JDH, Det. LLP, May 25, 1977; Charles Town, Jefferson County, Coll. JDH, Det. LLP, June 1, 1977; Inwood, Berkeley County, Coll. JDH, Det. LLP, June 1, 1977; Bear Rock Lakes, Ohio County, Coll. JDH, Det. LLP, May 25, 1977.

Chrysops pikei Whitney. North Bend State Park, Ritchie County, Coll. LB, Det. LB, June 23, 1977.

Chrysops sackeni Hine. Cranesville Swamp, Preston County, Coll. JWA and C. Mason, Det. LLP, June 10, 1977.

Chrysops sequax tau Philip. Grace, Hampshire County, Coll. CCC, Det. LLP, August 18, 1977.

Chrysops shermani Hine. Cranesville Swamp, Preston County, Coll. LB, Det. LB, June 10, 1977.

Chrysops univittatus Macquart. Bear Rock Lakes, Ohio County, Coll. JDH, Det. LLP, August 17, 1977; Grace, Hampshire County, Coll. CCC, Det. LLP, July 28, 1977.

Chrysops vittatus Wiedemann. McClintic Wildlife Station, Mason County, Coll. JDH, Det. LLP, July 7, 1977; Garretts Bend, Lincoln County, Coll. K. Hinckley, Det. LLP, August 16, 1977.

Hybomitra difficilis (Wiedemann). Burlington, Mineral County, Coll. LB, Det. LB, May 24, 1977; Cabwaylingo State Forest, Wayne County, Coll. LB, Det. LB, May 21, 1977; Pineville, Wyoming County, Coll. LB, Det. LB, May 20, 1977; Panther State Forest, McDowell County, Coll. LB, Det. LB, May 21, 1977; Cedar Creek State Park, Gilmer County, Coll. LB, Det. LB, June 4, 1977; North Bend State Park, Ritchie County, Coll. LB, Det. LB, June 23, 1977; Bens Run, Pleasants County, Coll. JDH, Det. LLP, May 25, 1977; Shannondale, Jefferson County, Coll. JDH, Det. LLP, June 1, 1977; Rainelle, Fayette County, Coll. T. Keeney, Det. LB, June 12, 1977.

Hybomitra lasiophthalma (Macquart). Reedsville Experiment Farm, Preston County, Coll. LB, Det. LB, May 23, 1977; Pleasant Creek, Barbour County, Coll. LB, Det. LB, May 12, 1977; Cedar Creek State Park, Gilmer County, Coll. LB, Det. LB, June 4, 1977; Bear Rock Lakes, Ohio County, Coll. JDH, Det. LLP, May 25, 1977; Bens Run, Pleasants County, Coll. JDH, Det. LLP, May 25, 1977; Boyer, Pocahontas County, Coll. CCC, Det. LLP, June 9, 1976.

Hybomitra sodalis (Williston). Stonecoal Lake, Upshur County, Coll. PVB, Det. LLP, June 27, 1977; Grace, Hampshire County, Coll. CCC, Det. LLP, July 7, 1977.

Tabanus americanus Forster. Grace, Hampshire County, Coll. CCC, Det. LLP, July 14, 1977.

Tabanus atratus atratus Fabricius. Rainelle, Fayette County, Coll. T. Keeney, Det. LB, August 1, 1977; Wayside, Monroe County, Coll. J.W. Begley, Det. J.W. Begley, August 15, 1977; Berkeley County, Coll. R. DeHaven, Det. LB, August 7, 1977; Kearneysville, Jefferson County, Coll. R. Barrat, Det. LB, August 21, 1976.

Tabanus calens Linnaeus. Shannondale, Jefferson County, Coll. JDH, Det. LLP, August 2, 1977; Nancy Hanks Memorial, Mineral County, Coll. LB, Det. LB, August 16, 1977; Monongalia County, Coll. Unknown, Det. LB, August 17, 1976.

Tabanus catenatus Walker. Hollywood, Monroe County, Coll. JDH, Det. LLP, August 7, 1977. Collected in a 15-watt blacklight trap.

Tabanus cymatophorus Osten Sacken*. Grace, Hampshire County, Coll. CCC, Det. LLP, August 4, 1977. Four females were collected in a Malaise trap operating at this site from May 19 through October 13, 1977.

Tabanus fairchildi Stone. Grace, Hampshire County, Coll. CCC, Det. LLP, May 26, 1977.

Tabanus lineola Fabricius. St. Albans, Kanawha County, Coll. JDH, Det. LLP, July 8, 1977; Stonecoal Lake, Upshur County, Coll. PVB, Det. LLP, June 27, 1977; McClintic Wildlife Station, Mason County, Coll. JDH, Det. LLP, July 7, 1977.

Tabanus marginalis Fabricius. Tomlinson Run State Park, Hancock County, Coll. JWA, Det. JWA, June 9, 1976; Stonecoal Lake, Upshur County, Coll. PVB, Det. LLP, June 27, 1977; Bartow, Pocahontas County, Coll. LB, Det. LB, June 27, 1977.

Tabanus molestus molestus Say. Panther State Forest, McDowell County, Coll. LB, Det. LB, July 10, 1977.

Tabanus nigrescens Palisot de Beauvois. Grace, Hampshire County, Coll. CCC, Det. LLP, July 21, 1977.

Tabanus nigripes Wiedemann. Pipestem Lake, Summers County, Coll. JDH, Det. LLP, June 28, 1977; McClintic Wildlife Station, Mason County, Coll. JDH, Det. LLP, July 7, 1977; Shannondale, Jefferson County, Coll. JDH, Det. LLP, August 2, 1977; Cranesville Swamp, Preston County, Coll. H. Teskey, Det. H. Teskey, larvae, June 10, 1977.

Tabanus pumilus Macquart. Bear Rock Lakes, Ohio County, Coll. JDH, Det. LLP, May 25, 1977; Allensville, Berkeley County, Coll. CCC, Det. LLP, May 25, 1977; St. Albans, Kanawha County, Coll. JDH, Det. LLP, June 17, 1977; North Bend State Park, Ritchie County, Coll. LB, Det. LB, June 22, 1977; McClintic Wildlife Station, Mason County, Coll. JDH, Det. LLP, July 7, 1977.

Tabanus quinquevittatus Wiedemann. Cedar Creek State Park, Gilmer County, Coll. LB, Det. LB, June 4, 1977; McClintic Wildlife Station, Mason County, Coll. JDH, Det. LLP, July 7, 1977; St. Albans, Kanawha County, Coll. JDH, Det. LLP, July 10, 1977; Garretts Bend, Lincoln County, Coll. K. Hinckley,

Det. LLP, July 12, 1977; Bear Rock Lakes, Ohio County, Coll. JDH, Det. LLP, August 17, 1977; Bluefield, Mercer County, Coll. J.W. Begley, Det. J.W. Begley, July 31, 1977; Jefferson County, Coll. R. Dunst, Det. LB, June 10, 1977.

Tabanus reinwardtii Wiedemann. Moorefield, Hardy County, Coll. K. Elrod, Det. LLP, June 30, 1977; Greenbrier State Forest, Greenbrier County, Coll. LB, Det. LB, July 9, 1977.

Tabanus sackeni Fairchild. Jacksons Mill, Lewis County, Coll. JDH, Det. LLP, July 26, 1977; Bunner's Ridge, Marion County, Coll. LB, Det. LB, August 4, 1977; Girl Scout Camp, Marshall County, Coll. G. Lippert, Det. LB, August 6, 1977; Wellsburg, Brooke County, Coll. R. Lindsey, Det. LB, August 7, 1977; Hurricane, Putnam County, Coll. JDH, Det. LLP, August 11, 1977.

Tabanus similis Macquart. Mt. Nebo, Nicholas County, Coll. JDH, Det. LLP, June 2, 1970. Male was collected in a 15-watt blacklight trap.

Tabanus sparus milleri Whitney. Fort Seybert, Pendleton County, Coll. W. North-eimer and K. Elrod, Det. LLP, July 22, 1976; Pipestem Lake, Summers County, Coll. JDH, Det. LLP, June 28, 1977; McClintic Wildlife Station, Mason County, Coll. JDH, Det. LLP, July 7, 1977.

Tabanus subsimilis subsimilis Bellardi. Newell, Hancock County, Coll. R. Lindsey, Det. LB, August 6, 1977; Pendleton County, Coll. J. Vandevender, Det. LB, September 4, 1977; Moorefield, Hardy County, Coll. LB, Det. LB, August 5, 1977.

Tabanus sulcifrons Macquart. McClintic Wildlife Station, Mason County, Coll. JDH, Det. LLP, July 7, 1977; Little Laurel Run, Preston County, Coll. JWA, Det. JWA, August 2, 1977; Garretts Bend, Lincoln County, Coll. K. Hinckley, Det. LLP, August 16, 1977; Kearneysville, Jefferson County, Coll. R. Barrat, Det. LB, October 26, 1976.

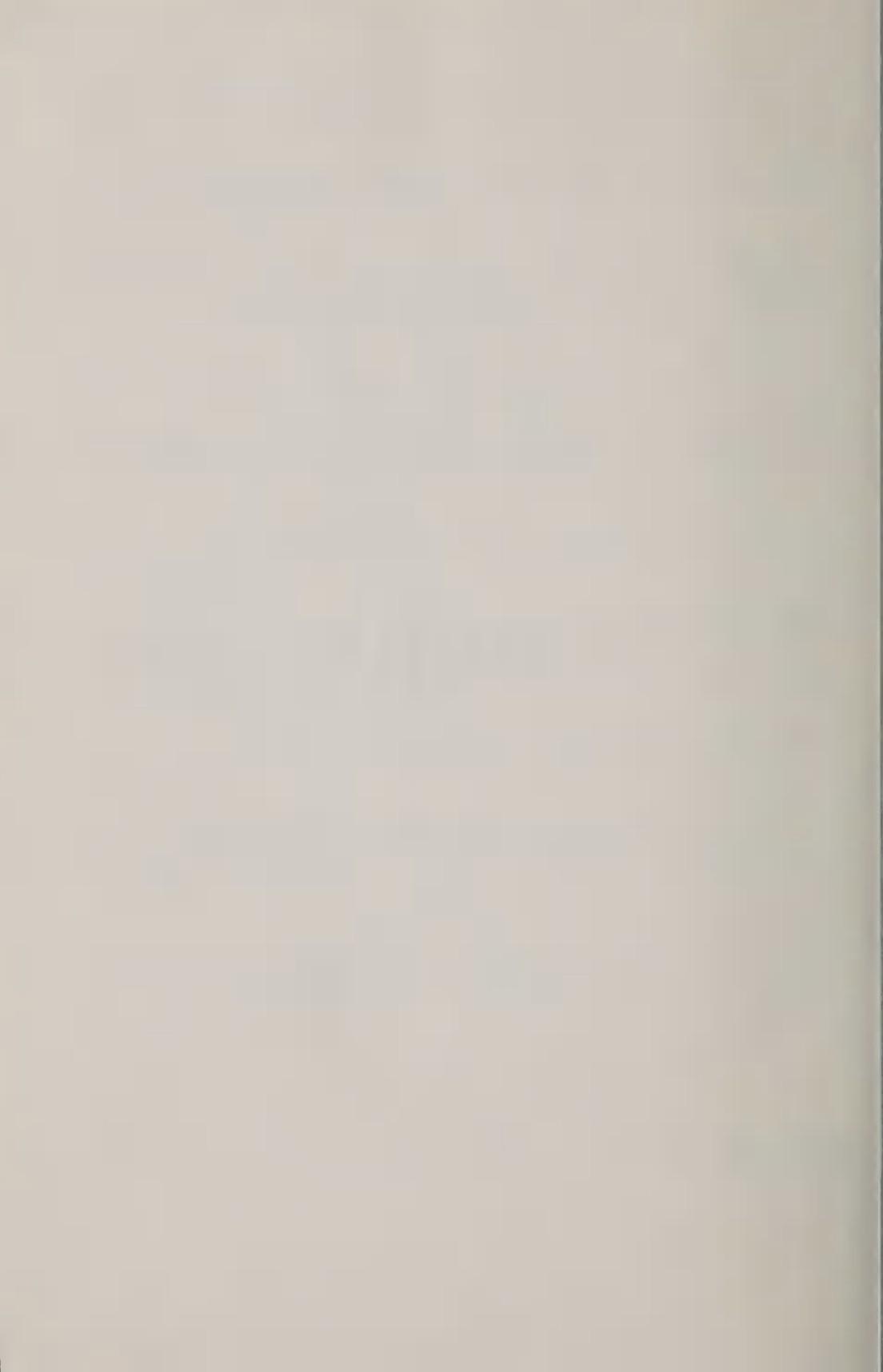
Tabanus superjumentarius Whitney. Pipestem Lake, Summers County, Coll. JDH, Det. LLP, June 28, 1977; McClintic Wildlife Station, Mason County, Coll. JDH, Det. LLP, July 7, 1977.

Tabanus trimaculatus Palisot de Beauvois. Moorefield, Hardy County, Coll. LB, Det. LB, July 4, 1977; McClintic Wildlife Station, Mason County, Coll. JDH, Det. LLP, July 7, 1977; Bluefield, Mercer County, Coll. J.W. Begley, Det. J.W. Begley, July 31, 1977.

Reference

Drees, B.M. 1976. Tabanidae of West Virginia (Diptera: Tabanidae). M.S. Thesis. West Virginia University, Morgantown, West Virginia. 233 p.

U.S. Dep. Agric.
Coop. Plant Pest Rep.
4(14):220-224, 1979



METRIC CONVERSION

1 cm = 0.393701 in
1 m = 3.28084 ft = 1.09361 yd
1 km = 0.621371 mi
1 sq cm = 0.155000 sq in
1 sq m = 10.7639 sq ft = 1.19599 sq yd
1 ha = 2.47104 acres
1 sq km = 0.386101 sq mi
1 kg = 2.20462 lb
1 t (metric ton) = 1.10231 short ton
1 kg/ha = 0.892183 lb/acre
1 t/ha = 0.446091 ton/acre

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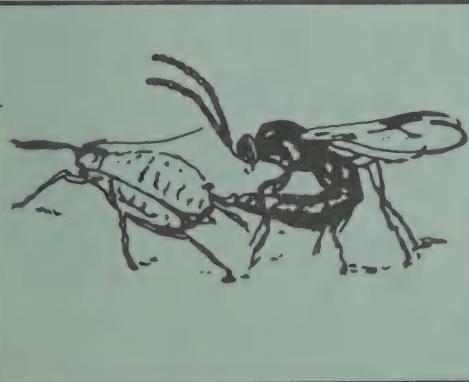
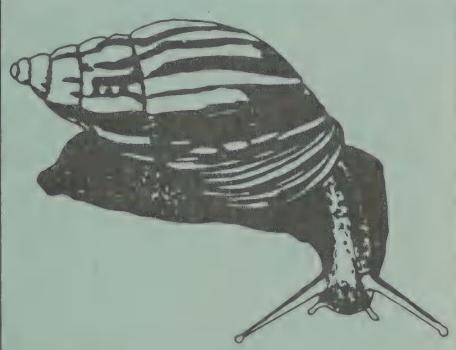
Cooperative PLANT PEST REPORT

May 4, 1979

U.S.
DEPARTMENT Vol. 4
OF AGRICULTURE No. 15

Animal
and Plant
Health
Inspection
Service

RECORDS



This publication is distributed weekly to Federal and State agencies, universities, farmers, and others interested in containing or controlling pests in the United States.

Data included in this publication are compiled from reports submitted by cooperating State, Federal and other agricultural and industrial specialists. Accuracy of the reports is not verified prior to publication.

Cooperative Plant Pest Report supersedes *Cooperative Economic Insect Report*, which was discontinued with Volume 25, Numbers 49-52, 1975.

Correspondence should be directed to:

CPPR

New Pest Detection and Survey Staff
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Hyattsville, Maryland 20782

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COOPERATIVE PLANT PEST REPORT**HIGHLIGHTS**Current Conditions

TAN SPOT and SPECKLED LEAF BLOTH most widespread foliar diseases on wheat in Kansas. (p. 228-229).

SPRING BLACK STEM and LEPTO LEAF SPOT most prevalent diseases on alfalfa in Kansas. (p. 231-232).

ALFALFA WEEVIL heavy on alfalfa in eastern parts of New Mexico. Affected 70% or more of tips in southern one-eighth of Illinois and parts of southwestern and south-central Indiana. (p. 233-235).

Spores of the causal agent of CEDAR-APPLE RUST detected in most areas of Kansas. (p. 237).

Ascospores of the fungus that causes APPLE SCAB released in all areas of Kansas. (p. 237).

Prediction

WHEAT LEAF RUST, OAT CROWN RUST, BARLEY LEAF RUST, and OAT STEM RUST could become more severe than in recent years due to anticipated late planting of spring cereals in northern Great Plains. (p. 227).

ARMYWORM larvae expected on wheat soon in Illinois. (p. 230).

VARIEGATED CUTWORM will be laying eggs soon in Ohio. (p. 236).

Detection

A SCOLYTID BEETLE is new for North Carolina. (p. 237).

For new county and island records see page 241.

Some First Occurrences of the Season

EUROPEAN CORN BORER pupae in Missouri and Kentucky. CORN EARWORM adults in Missouri. SPECKLED LEAF BLOTH, WHEAT POWDERY MILDEW, and CEPHALOSPORIUM STRIPE in Kansas. ENGLISH GRAIN APHID migrant in Wisconsin. BEAN LEAF BEETLE in Illinois. VARIEGATED CUTWORM adult in Nebraska. GREEN CLOVERWORM larvae in Oklahoma. COLORADO POTATO BEETLE in Oklahoma. VARIEGATED CUTWORM IN ADULTS IN Ohio. ORIENTAL FRUIT MOTH in Kansas. PECAN NUT CASEBEARER in Oklahoma. ELM LEAF BEETLE egg mass in Kansas. LONE STAR TICK in Missouri.

Special Reports**Summary of Pest Conditions in the United States - 1978**

Deciduous Fruits and Nuts (p. 244-248).

Citrus (p. 248-249).

Small Fruits (p. 249-250).

Reports in this issue are for the week ending April 27 unless otherwise indicated.

CONTENTS

Corn, Sorghum, Sugarcane	
Insects.....	227
Small Grains	
Diseases.....	227
Insects.....	230
Forage Legumes	
Diseases.....	231
Insects.....	233
Cotton	
Insects.....	236
Miscellaneous Field Crops	
Insects.....	236
Potatoes, Tomatoes, Peppers	
Diseases.....	236
Insects.....	236
Cole Crops	
Insects.....	236
General Vegetables	
Insects.....	236
Beneficial Organisms and Their Enemies	
Insects.....	239
Federal and State Programs	
Diseases.....	239
Insects.....	240
Hawaii Pest Report.....	240
Detection.....	241
Light Trap Collections.....	242
Pest Interceptions of Quarantine Significance at Ports of Entry.....	243
Summary of Pest Conditions in the United States - 1978	
Deciduous Fruits and Nuts	
Diseases.....	244
Insects.....	244
Citrus	
Diseases.....	248
Insects.....	248
Small Fruits	
Insects.....	249
Deciduous Fruits and Nuts	
Diseases.....	237
Insects.....	237
Other Tropical and Subtropical Fruit	
Insects.....	238
Small Fruits	
Insects.....	238
Ornamentals	
Insects.....	238
Forest and Shade Trees	
Diseases.....	238
Insects.....	238
Man and Animals	
Insects.....	239
Households and Structures	
Insects.....	239

CORN, SORGHUM, SUGARCANE

INSECTS

EUROPEAN CORN BORER (*Ostrinia nubilalis*) - NEBRASKA - Winter larval survival averaged 53%. District> County= Five larvae (and average) per 0.8 sq m in corn fields (f): NE> Cedar= 0-4 (1.15) in 5f, Dixon= 0.5-5 (2.5) in 5f, and Knox= 0.25-4.5 (2.31) in 4f. (Witkowski). MISSOURI - First of season. Area> status on surveyed corn: SE> pupation 8%. (R.E. Munson). KENTUCKY - First pupae of season. District> County= counts from cornstalks: Bluegrass> Fayette= 6 of 172 (about 5%) dissected larvae pupated. (G.C. Brown).

INDIANA - District> County= European corn borer larval status on corn: SC> Lawrence= 16 taken from upright stalks in 1 field April 24. (R.W. Meyer).

WISCONSIN - Dead and dying larvae examined from several locations in southern counties showed *Beauveria bassiana* (a corn borer fungus) caused death of some larvae. District> County= overwintered survival rate on corn: SC> Jefferson= 100% in 1 field. (O.L. Lovett).

BLACK CUTWORM (*Agrotis ipsilon*) - KANSAS - District> County= status: SE> Labette= none on corn [5 cm] in 1 field April 25 (S.C. White); NE> Brown= adults heaviest (376) in blacklight trap at Hiawatha on April 16 (J.W. Reese, K.O. Bell, Jr.). IOWA - District> County= adults trapped in corn: SC> Warren= many males in pheromone traps night of April 21 and 22 (W.B. Showers, L.V. Kaster) (first male on night of April 29 in same area in 1978) and Ringgold= 4-13 per night in blacklight traps on nights of April 16-23 at Beaconsfield; and NC> Hancock= 1-3 for April 21-23 at Kanawha (L. Townsend). OHIO - Adults still taken in pheromone and blacklight traps in corn. District> County= Adults in traps April 18-24: NE> Wayne= 27 in 4 traps; C> Knox= 8 in 5 traps; and NC> Ashland= 38 in 10 traps. (G.P. Walker).

CORN EARWORM (*Heliothis zea*) - MISSOURI - First of season. Area> status on corn: SE> adults trapped, earliest capture of previous 5 years. (R.E. Munson).

SOUTHERN CORN BILLBUG (*Sphenophorus callosus*) - NORTH CAROLINA - District> County= status on corn: Southern Coastal> BTaden, Sampson, Columbus, Duplin, Pender, and Onslow= damaged plants [5-10 cm tall]. Damage in 15 fields in usual pattern of heavy border row damage. (T.N. Hunt).

SMALL GRAINS

DISEASES

By April 24, maturity of winter cereals throughout most of Great Plains 1-2 weeks later than normal due to cold winter. Wet soils and flooding delayed planting in upper Midwest. Planting about 1 week later than normal and could be very late in Red River Valley of the North due to severe flooding. Cereal rusts apparently did not overwinter north of San Antonio, Texas. Inoculum arriving in northern Great Plains will have to come from southern Texas, Mexico, or perhaps Louisiana. The disease moving northward, based on data from previous years, probably will differ genetically from previous northern populations. Resistance provided by Lr9, 24, and adult plant resistance of Era often inadequate in southern Texas. Due to anticipated late planting of spring cereals in northern Great Plains, wheat leaf rust, oat crown rust, oat stem rust, and barley leaf rust could become more severe than in recent years. (A.P. Roelfs, D. Long).

WHEAT LEAF RUST (*Puccinia recondita* f.sp. *tritici*) generally light on Nadadores 63, the primary commercial wheat cultivar, south of San Antonio, TEXAS, April 11-24. Severities of 40-100% on wheat [berry] common on experimental lines in nurseries and on fields of some other cultivars; some losses will occur. None observed in KANSAS. (Eversmeyer). Moderately severe in Yaqui Valley, MEXICO, but much less severe than in 1977. (A.P. Roelfs, D. Long).

OKLAHOMA - District> County= wheat leaf rust prevalence on wheat varieties: SW> Harmon= trace on 'TAM 101' and Tillman= trace on 'Triumph 64'. (E. Williams, Jr.).

WHEAT STRIPE RUST (*Puccinia striiformis*) trace on wheat at Uvalde, TEXAS (Erickson), and at San Antonio, April 11-24. Recent warm temperatures should prevent increase. None observed this spring in WASHINGTON. (Line). New resistant cultivars, Daws and Stephens, should reduce potential of epidemics in Mount Vernon, Washington, area. (A.P. Roelfs, D. Long).

OAT CROWN RUST (*Puccinia coronata* var. *avenae*) light on oats in most fields in southern TEXAS due to use of resistant cultivars, April 11-24. Light amounts developed on TAM-O-312. Moderately to severely rusted scattered fields of Ora, Nora, and Florida 501. Overall losses in southern Texas will be light, but amount of inoculum produced will be greater than in recent years. (A.P. Roelfs, D. Long).

BARLEY LEAF RUST (*Puccinia hordei*) destroyed 48.6-ha field in southern Frio County, TEXAS, April 11-24. Severities trace to 100% in plots in southern Texas. Little barley grown commercially there. (A.P. Roelfs, D. Long).

For stem rusts, see page 239.

TAN SPOT (*Pyrenophora trichostoma*) - OKLAHOMA - District> County= prevalence/severity in surveyed wheat fields week ending April 20: C> Payne, Kingfisher, and Logan and NC> Noble, Kay, Grant, Garfield, and Major= almost 100%/trace to 40% on lower leaves. (K.E. Conway). Current prevalence on wheat varieties: SW> Harmon= 2% on 'TAM 101' and Jackson= 2% on unknown variety. (E. Williams, Jr.).

KANSAS - Tan spot, 1 of 2 foliar pathogens active on wheat week ending April 20. District> County= prevalence/severity on wheat [tiller unless stated otherwise] in number of fields (f) surveyed: EC> Anderson= trace/no data [tiller to joint] in 2f; SE> Wilson= 80%/light in 2f, and Labette= trace to 20%/light [tiller to joint] in 3f; NC> Cloud= 5-100%/light in 2f, Republic= none seen in 2f, Washington= 25%/light in 1f, and Clay= 100%/light in 1f; NE> Riley= 100%/light in 1f; C> Marion= 50%/light [tiller to joint] in 1f, McPherson= 1%/light in 1f, and Rice= none seen in 2f, and Barton= none seen in 2f; SC> Reno= none seen in 1f, Stafford= 90%/light [tiller to joint] in 2f, Kiowa= 5%/light in 1f, Pratt= trace/no data in 2f, Barber= 2%/light [joint] in 2f; Edwards= 1%/light in 2f, and Pawnee= none seen in 1f, and SW> Seward= none seen [joint] in 2f and Haskell= trace [joint] in 1f.

Kansas - Tan spot currently continued 1 of 2 most widespread foliar diseases on wheat. District> County= prevalence/severity on wheat [host stage] in number of fields (f): EC> Geary= 30%/light [1 node] in 1f, Morris= 10%/light [1 node] in 2f, Chase= 100%/light [1 node] in 2f, and Lyon= none seen [1 node] in 1f; C> Dickinson= none seen [2 node] in 1f, and Marion= trace to 100%/light [tiller] in 2f; NC> Clay= 5%/light [1 node] in 1f, and Ottawa= trace/no data [1 node] in 2f; SE> Greenwood= 50%/light [1-2 node] in 1f, Wilson= 10-100%/light [1-2 node] in 3f, Crawford= 10%/light [1-2 node] in 1f, and Cherokee= trace to 40% light

[1-2 node] in 5f; SC> Pratt= tan spot 100%/moderate [1-2 node] and Sedgwick= 90-100%/moderate [1-2 node] in 1f each; and SW> Grant= trace/no data in 2f, Stevens= none seen in 2f, Morton= trace/no data in 3f, Stanton= trace/ no data [joint] in 1f, Finney= trace/no data [joint] in 2f, Haskell= trace/no data [joint] in 1f, Seward= trace/no data [joint] in 2f, Gray= none seen in 1f, and Ford= trace/no data [joint] in 1f. (T. Sim, IV).

SPECKLED LEAF BLOTHC (*Septoria tritici*) - KANSAS - First of season over large portion of central and southern areas. One of 2 foliar pathogens active on wheat week ending April 20. District> County= prevalence/severity on wheat [tiller unless stated otherwise] in number of fields (f): EC> Anderson= none seen [tiller to joint] in 2f; SE> Wilson= none seen in 2f and Labette= 30%/light, [tiller to joint] in 3f; NC> Cloud= trace/no data in 2f, Republic= 100%/light in 2f, Washington= 30%/light in 1f, and Clay= 50%/light in 1f; NE> Riley= none seen in 1f; C> Marion= 30%/light [tiller to joint] in 1f, McPherson= trace to 30%/light in 1f, and Rice= 10-30%/light in 2f; SC> Reno= 5%/light in 1f, Stafford= trace/no data [tiller to joint] in 1f, Kiowa= trace/no data in 1f, Pratt= none seen in 1f, Barber= 5%/light [joint] in 2f, Edwards= 100%/light in 2f, and Pawnee= 100%/light in 1f, C> Barton= 80%/light in 2f; and SW> Seward= trace/no data [joint] in 2f and Haskell= trace/no data [joint] in 1f.

Kansas - Speckled leaf blotch currently continued 1 of 2 most widespread foliar diseases of wheat. District> County= prevalence/severity on wheat [host stage] in number of fields (f): EC> Geary= trace/no data [1 node] in 1f, Morris= 10%/light [1 node] in 2f, Chase= none seen [1 node] in 2f, and Lyon= trace/no data [1 node] in 1f; C> Dickinson= 100%/light [2 node] in 1f, and Marion= none seen [tiller] in 2f; NC> Clay= 20%/light [1 node] in 1f, and Ottawa= none seen [1 node] in 2f; SE> Greenwood= trace/no data [1-2 node] in 1f, Wilson= trace/no data [1-2 node] in 3f, Crawford= none seen [1-2 node] in 1f and Cherokee= none seen [1-2 node] in 5f; SC> Pratt= none seen [1-2 node] in 1f; SW> Grant= trace/no data [joint] in 2f, Stevens= none seen [joint] in 2f, Morton= trace/no data [joint] in 3f, Stanton= none seen [joint] in 1f, Finney= trace/no data [joint] in 2f, Haskell= trace/no data [joint] in 1f, Seward= none seen [joint] in 2f, Gray= none seen [joint] in 1f, and Ford= trace/no data [joint] in 1f. (T. Sim, IV).

CROWN ROTS (*Fusarium* spp.) and *Helminthosporium* spp. complex) - KANSAS - District> County= prevalence in winter-stressed wheat fields week ending April 20: NE> Riley and NC> Clay and Washington= 1-10%. (T. Sim, IV).

LOOSE SMUT (*Ustilago tritici*) - OKLAHOMA - District> County= prevalence on wheat variety: SW> Tillman= trace on 'Triumph 64'. (E. Williams, Jr.).

WHEAT POWDERY MILDEW (*Erysiphe graminis* f.sp. *tritici*) - OKLAHOMA - District> County= prevalence on wheat variety: SW> Tillman= 60% on 'Payne'. (E. Williams, Jr.). KANSAS - First appearance of season on wheat in central area. District> County= prevalence on wheat: EC> Geary, C> Dickinson, Saline, McPherson, and Rush= light; SC> Sedgwick= 50% in 1 field, and SE> Cherokee= trace to 30% in 3 fields. (T. Sim, IV).

CEPHALOSPORIUM STRIPE (*Cephalosporium gramineum*) - KANSAS - First of season, 3 weeks earlier than in 1978. District> County= status: SC> Sumner= prevalence trace in wheat [not yet jointing] field April 13. Currently more widespread on wheat in central area. Status: SC> Harvey and C> McPherson= reported on wheat and Dickinson and Saline= observed on volunteer wheat. (T. Sim, IV).

WHEAT STREAK MOSAIC VIRUS - KANSAS - District> County= symptoms on wheat week ending April 20: SC> Pratt= observed in seeded wheat field in area where disease was problem last year, infected volunteer wheat nearby; Reno and Kiowa and NC> Ottawa= observed in volunteer wheat. Currently more widespread on wheat in central area. Prevalence in fields surveyed: C> Dickinson, Saline, SC> Kingman, Stafford, C> Barton, Rush, NC> Osborne, Mitchell, and EC> Morris= less than 2%; SC> Harvey and Pratt and EC> Morris= on volunteer wheat. (T. Sim, IV).

SOIL-BORNE WHEAT MOSAIC VIRUS - KANSAS - Area> status on wheat week ending April 20: SC> symptoms fading in parts of this area, and south and west of Wichita> will probably affect yields most in this area. (T. Sim, IV).

INSECTS

CORN EARWORM (*Heliothis zea*) - FLORIDA - District> County= late instar larvae per 100 sweeps of wheat: C> Alachua= 15 at Gainesville. (F.W. Mead).

TOBACCO BUDWORM (*Heliothis virescens*) - FLORIDA - District> County= larvae per 100 sweeps of wheat and oats, respectively: C> Alachua= 2 and 1 at Gainesville. (F.W. Mead).

ARMYWORM (*Pseudaletia unipuncta*) - ILLINOIS - Area> status on wheat: Southern> none but many egg-laden females in light trap at university farm. Expected in wheat in near future. (K. Black).

ARMY CUTWORM (*Euxoa auxiliaris*) - NEBRASKA - District> County= status on wheat: NW> Scotts Bluff, Morrill, Cheyenne, and Kimball= mostly 3rd instar larvae 0-3 per 0.3 row m of winter wheat, damage not economic; Dawes, Sioux, Box Butte, Sheridan, and Banner= larvae trace. (Hagen).

STRIPED CUCUMBER BEETLE (*Acalymma vittata*) - OHIO - First active adults of season. District> County= adults on wheat: NC> Crawford and C> Marion= on wheat April 23. (G.P. Walker).

GREENBUG (*Schizaphis graminum*) - TEXAS - District> County= counts (or maximum) per 0.3 row m of small grains: Cross Timbers> Archer= 2-5, Southern Low Plains> Baylor= 2-5, Northern Low Plains> Foard= (6), Wichita= (7), and Wilbarger= (10). (J.A. Jackman).

ENGLISH GRAIN APHID (*Macrosiphum avenae*) - WISCONSIN - First migrant of season. District> County= counts per 300 sweeps of winter wheat: SC> Dane= 1 winged adult in northern area. (O.L. Lovett).

CHINCH BUG (*Blissus leucopterus leucopterus*) - KANSAS - District> County= adults per 0.3 row m of wheat [host stage] in number of fields (f) April 23-25: NE> Riley= averaged trace and 1.7 [jointing] in 2f (K.O. Bell, Jr.); SC> Sedgwick= averaged 0 and 4 along border [no data] in 2f (G.A. Salsbury); EC> Lyon and SE> Greenwood, Wilson, Neosho, Crawford, and Cherokee= averaged 0-6 [jointing] in 12f (S.C. White); NC> Clay, Ottawa, and C> Saline= averaged 0-0.1 [no data] in 4f (B.D. Hilbert).

RICE STINK BUG (*Oebalus pugnax*) - FLORIDA - District> County= adults per 100 sweeps of nearly mature oats and wheat, respectively: C> Alachua= 4 and 2 at Gainesville. (F.W. Mead).

A LYGAEID BUG (*Paromius longulus*) - FLORIDA - District> County= adults per 100 sweeps of oats and wheat, respectively: C> Alachua= 2 and 30 at Gainesville. (F.W. Mead).

WINTER GRAIN MITE (*Penthaleus major*) - TEXAS - District> County= counts (and maximum) per 0.3 row m of small grains: Cross Timbers> Archer= (0.9); Southern Low Plains> Baylor= 44 (0.9 at another site); and Northern Low Plains> Foard= (0.9) and Wichita= (1). (J.A. Jackman).

FORAGE LEGUMES

DISEASES

SPRING BLACK STEM (*Phoma medicaginis*) - KANSAS - Continued 1 of 2 most prevalent alfalfa diseases; defoliation began in some areas (indicated by asterisks). District> County= prevalence/severity on alfalfa [host height] in number of fields (f) surveyed week ending April 20: NE> Doniphan= trace/- [10 cm] in 2f, Atchison= trace to 10%/light [10-13 cm] in 4f, and Riley= 100%/moderate* [30 cm] in 1f; EC> Douglas= 100%/light* [17 cm] in 1f, Anderson= 100%/light* [18 cm] in 1f, Osage= trace to 50%/light [17 cm] in 4f, Lyon= 60%/light* [23 cm] in 2f, Chase= 10%/light [20 cm] in 2f; NC> Clay= 100%/moderate* [38 cm] in 1f, Washington= 80%/light* [15 cm] in 1f, Republic= 100%/light* [20 cm] in 2f, and Cloud= 100/moderate* [25-30 cm] in 2f; and C> Marion= 100%/moderate* [10-15 cm] in 2f, McPherson= 100%/light* [15 cm] in 1f, Rice= 90%/light* [15 cm] in 1f, and Barton= 100%/moderate* [30 cm] in 1f; SC> Reno= 90%/light* [15 cm] in 1f, Pratt= 100%/light* [18 cm] in 1f, Barber= 100%/moderate* [15-30 cm] in 2f, Edwards= 10%/light* [15 cm] in 1f, Pawnee= 20%/light* [15 cm] in 1f, and Stafford= 100%/light* [25 cm] in 1f; SE> Allen= 100%/light* [25 cm] in 1f, Wilson= 30-60%/light [28 cm] in 4f, Elk= 20-80%/light [30 cm] in 3f, Montgomery= 50%/light* [33 cm] in 1f, Labette= trace to 60%/light [25-30 cm] in 2f, Crawford= 10%/light* [24 cm] in 1f; and SW> Finney= 100%/light [10 cm] in 1f, Kearny= 100%/light [13 cm] in 1f, Seward= 50%/light [15 cm] in 1f, and Haskell= 100%/light [15 cm] in 1f.

KANSAS - Spring black stem still 1 of 2 most widespread alfalfa diseases on first growth, defoliation in almost every field surveyed. District> County= prevalence/severity on alfalfa [host height] in number of fields (f): NE> Pottawatomie= 100%/light [46 cm] in 1f, and Atchison= 60%/moderate [30 cm] in 2f, EC> Geary= 100%/light [38 cm] in 1f, Morris= 100%/light [38 cm] in 1f, Wabaunsee= 100%/moderate [46 cm] in 1f, Lyon= 100%/light [30 cm] in 2f, Anderson= 80%/light [36 cm] in 1f, and Douglas= 30%/light [36 cm] in 1f; SE> Elk= 10/30% light [30-46 cm] in 4f, Montgomery= 10%/light [41 cm] in 1f, Crawford= 20%/light [36 cm] in 1f, Cherokee= trace [66 cm] in 1f, Labette= trace [38 cm] in 1f, and Butler= 100%/moderate [38 cm] in 1f; NC> Clay= 10%/light [30 cm] in 1f; C> Saline= 25%/light [33 cm] in 2f, Dickinson= 100%/light [30 cm] in 1f, Marion= 100%/light [46-51 cm] in 2f; SC> Kiowa= 100%/moderate [18-20 cm] in 2f, Sedgwick= 100%/moderate [46 cm] in 1f, Reno= 100%/moderate [33 cm] in 1f; and SW> Kearny= 100%/light [20 cm] in 1f, Finney= 100%/moderate [18 cm] in 1f, Haskell= 100%/moderate [20 cm] in 1f, Seward= 100%/moderate [15 cm] in 1f, and Ford= 100%/moderate [20 cm] in 1f. (T. Sim, IV).

LEPTO LEAF SPOT (Leptosphaerulina briosiana) - KANSAS - Continued 1 of 2 most prevalent alfalfa diseases. District> County= prevalence/severity on alfalfa [host height] in number of fields (f) surveyed week ending April 20: NE> Doniphan= 20%/light [10 cm] in 2f, Atchison= 20%/light [10-13 cm] in 4f, and Riley= none/no data [30 cm] in 1f; and EC> Douglas= 100%/light [17 cm] in 1f, Anderson= 100%/light [18 cm] in 1f, Osage= 50-80%/light [17 cm] in 4f, Lyon= 100%/moderate [23 cm] in 2f, Chase= 100%/moderate [20 cm] in 2f; NC> Clay= none/no data [38 cm] in 1f, Washington= none/no data [15 cm] in 1f, Republic= none/no data [20 cm] in 2f, and Cloud= 10%/light [25-30 cm] in 2f; and C> Marion= 40-50%/light [10-15 cm] in 2f, McPherson= 30%/light [15 cm] in 1f, Rice= trace/no data [15 cm] in 1f, and Barton= trace/no data [30 cm] in 2f; and SC> Reno= trace/no data [15 cm] in 1f, Pratt= trace/no data [18 cm] in 1f, Barber= 25%/light [15-30 cm] in 2f, Edwards= none/no data [15 cm] in 1f, Pawnee= none/no data [15 cm] in 1f, and Stafford= 10%/light [25 cm] in 1f; SE> Allen= 100%/light [25 cm] in 1f, Wilson= 100%/light [28 cm] in 4f, Elk= 90-100%/light [30 cm] in 3f, Montgomery= 50%/light [33 cm] in 2f, Labette= trace to 100%/light [25-30 cm] in 2f, Crawford= 100%/light [24 cm] in 2f; and SW> Finney= none/no data [10 cm] in 2f, Kearny= none/no data [13 cm] in 1f, Seward= trace/no data [15 cm] in 1f, and Haskell= trace/no data [15 cm] in 1f.

Kansas - Lepto leaf spot continued 1 of 2 most widespread alfalfa diseases on first growth. District> County= prevalence/severity in alfalfa [host height] in number of fields (f): NE> Pottawatomie= none seen [46 cm] in 1f, and Atchison= 10%/light [30 cm] in 2f; EC> Geary= none seen [38 cm] in 1f, Morris= trace [38 cm] in 1f, Wabaunsee= 60%/light [46 cm] in 1f, Lyon= 100%/light [30 cm] in 2f, Anderson= 20%/light [36 cm] in 1f, and Douglas= 80%/light [36 cm] in 1f; SE> Elk= 40-100%/light [30-46 cm] in 4f, Montgomery= 100%/light [41 cm] in 1f, Crawford= 70%/light [36 cm] in 1f, Cherokee= trace [66 cm] in 1f, Labette= trace [38 cm] in 1f, and Butler= trace [38 cm] in 1f, NC> Clay= 10%/light [30 cm] in 1f; C> Saline= 20%/light [33 cm] in 2f, Dickinson= none seen [30 cm] in 1f, and Marion= none seen [46-51] in 2f; SC> Kiowa= 45%/light [18-20 cm] in 2f, Sedgwick= trace/no data [46 cm] in 1f, and Reno= 70%/light [33 cm] in 1f; and SW> Kearny= trace/no data [20 cm] in 1f, Finney= trace/no data [18 cm] in 1f, Haskell= trace/no data [20 cm] in 1f, Seward= trace/no data [15 cm] in 1f, and Ford= trace/no data [20 cm] in 1f. (T. Sim, IV).

ALFALFA DOWNY MILDEW (Peronospora trifoliorum) - OKLAHOMA - District> County= prevalence on irrigated alfalfa varieties in number of hectares: Panhandle> Texas= 70-90% on 'Cimarron' in 97.1 ha, trace on 'Cimarron' (planted 1 week later) in 97.1 ha, trace on 'Dawson' in 48.6 ha, trace on 'Resistador' in 48.6 ha, and 20-30% on 'Kanza' in 48.6 ha. (E. Williams, Jr., K.E. Conway). KANSAS - First of season. District> County= prevalence on alfalfa [host height] in 1 field each week ending April 20: NC> Washington= trace [15 cm] and Cloud= 50% [30 cm]. Current prevalence on alfalfa [46 cm]: C> Marion= about 1% in 1 field. (T. Sim, IV).

OKLAHOMA - District> County= alfalfa weevil eggs, larval averages per 10 sweeps, or percent of forage legume tips infested week ending April 20: SC> Stephens= eggs averaged 44 per 0.09 sq m April 12 and Garvin= 0-39% per 30 stems; C> Creek= larvae 70, Logan= larvae 25, Kingfisher= larvae 8, Canadian= larvae 70, and Oklahoma= larvae 150; NE> Pawnee= larvae 70, Tulsa, Wagoner, and EC> Muskogee= 5-95%, 10-15% in most fields; and NC> Alfalfa= 5-50% with 40-50% in 4 of 8 fields (most larvae in 1st instar). (D.C. Arnold).

INSECTS

ALFALFA WEEVIL (*Hypera postica*) - UTAH - First eggs of season. District> County= status on alfalfa: N> Cache= eggs found April 23 at Providence, adults active in Richmond and Providence areas with some stem scarring due to feeding. (D.W. Davis et al.). NEW MEXICO - District> County= status on alfalfa week ending April 20: NW> Bernalillo= mostly 3rd instar, 0-3 larvae per 25 sweeps in 2 fields in south valley of Albuquerque (C. Heninger); SE> Eddy= populations still heavy in fields not treated or treated with pesticide with very short residual, and Lea= populations lighter, fewer fields needed treatment (L. Gholson). Current larval status per sweep of alfalfa: SE> Eddy= adults and larvae (all instars) appearing in heavy numbers; NE> Quay= all instars 5-15 at Tucumcari and 1-2 at San Jon, damage severe to foliage in heavily infested fields. (C. Heninger).

OKLAHOMA - Area> current alfalfa weevil status on alfalfa: SW> larvae still heavy (first growth cut in many fields) and WC> up to 60% tips reinfested in uncut, treated fields. District> County= eggs, larvae, and percent tip infestations: NC> Alfalfa, Major, Garfield, Kay, and Noble, and C> Kingfisher= no data, about 70% of larvae in 2nd or 3rd instars and about 10% in cocoons, and 20-80%; Grady= eggs averaged 6 per 0.09 sq m April 19, no data, and no data, and Payne= eggs averaged 6 per 0.09 sq m April 24, no data, no data, and no data, NE> Rogers= no data, larvae averaged 100 or more per 10 sweeps in 19% of fields, and no data, Wagoner and EC> Muskogee= no data, larvae averaged 100 or more per 10 sweeps in about 10% of fields (averaged 40 per 30 stems in 1 field in Muskogee County); SC> Stephens= eggs averaged 6 per 0.09 sq m April 21, no data, overwintered adults averaged 25 per 100 sweeps. (D.C. Arnold).

KANSAS - Alfalfa weevil larvae increased to significant numbers in some alfalfa in southern area with up to 2 per stem and 96% of tips damaged in 1 field in Pratt County. Overwintered adults heavy in some fields in south-central and southeastern areas. Tip lacing not serious except in 1 field in Pratt County with about 3 cm of tips seriously laced where larvae averaged 240 per sweep. Alfalfa growth generally very rapid and can withstand heavy larval numbers before injury noticeable. Larvae mostly 1st to 3rd instars but some 4th instars found and 1 prepupa in field in Pratt County. District> County= major 2 larval instars, larval averages per stem, and percent alfalfa tips damaged [average stem length] April 20-26: SC> Pratt= 1st and 2nd, 2.0, and 96% [25 cm], Sumner= 1st and 2nd, 0.6, and 14% [38 cm], Kiowa= 2nd and 3rd, 1.3, and 56% [18 cm], and 2nd and 3rd, 0.2, and 24% [20 cm], and Reno= 2nd and 3rd, 0.4, and 52% [33 cm]; SW> Finney= 3rd and 4th, 1.0, and 80% [18 cm], and Kearny= 1st and 2nd, 0.1, and 10% [20 cm]; NE> Atchison= 1st and 3rd, 0.4, and 32% [30 cm], Riley= 1st and 2nd, 0.1, and trace [30 cm], and 1st and 2nd, 0.02, and trace [33 cm]; SE> Montgomery= 2nd and 3rd, 1.3, and 24% [41 cm], and Crawford= 1st and 2nd, 0.6, and 42% [36 cm]. (G.A. Salsbury et al.).

Kansas - District> County= alfalfa weevil larvae per sweep of alfalfa, adults per 100 sweeps, percent of tips damaged [host height] in 1 field (f) unless stated otherwise April 20-26: SW> Haskell= 2, no data, and no data [20 cm], Seward= 4, no data, no data [15 cm], Ford= 8, no data, and no data [20 cm]; SC> Kiowa= no data, 7, and no data [18 cm], Pratt= 240, 16, and 60% [25 cm], Stafford= 94, 4, and 65% [30 cm], Sedgwick= 43, 10, and 30% [46 cm]; SE> Elk= 0-5.2, 0-52, and no data [30-58 cm] in 4f, Crawford= no data, 20, and no data [no data], Cherokee= 0.9, 30, and no data [66 cm], Labette 2.3, 10, and no data [38 cm], Butler= 4-58, 2-4, and 2-40% [23-38 cm] in 2f, Cowley= 37, 32, and 50%

[51 cm]; EC> Lyon= alfalfa weevil 0 to trace, 2-4, and no data [25-30 cm] in 2f, Anderson= 0.3, 10, and no data [no data], Shawnee= trace, 4, and no data [33 cm], Wabaunsee= 0 to trace, 0-4, and no data [25-33 cm] in 3f, Chase= 1.4, 13, and 14% [38 cm]; C> Saline= 0.1, 0.5-3, and no data [33-38 cm] in 2f, NC> Clay= 0-0.3, 0-1, and no data [30-33 cm] in 2f, Ottawa= 0.1, 0, and no data [36 cm]; NE> Atchison= 0.2, 15, and no data [30 cm], Pottawatomie= 0, 2, and no data [30 cm], and Riley= 0-0.1, 0-5, and no data [30-33 cm] in 5f. (S.C. White et al.).

ILLINOIS - Cold, wet weather and late frost held alfalfa growth back. Area> alfalfa weevil status on alfalfa week ending April 20: South of State Highway 13> treatment needed or soon to be needed in many alfalfa fields [10-20 cm], 2nd and 3rd instar larvae 20-60 per 30 stems with tip feeding 20-65% in Jackson County; north of State Highway 13> larvae and damage decreased rapidly; as far north as Interstate 70> occasional larvae found. Currently, south of State Highway 13> larvae 5+ per stem, tip feeding damage up to 85%, and larvae 5+ per stem, almost all forage legume fields treated or should have been treated; between State Highways 13 and 15> larvae 1-3 per stem, tip feeding averaged 10% and damage in some fields sustained at higher levels; north of U.S. Highway 50> larvae few north of line from Alton, Illinois, to Vincennes, Indiana, and damage decreased. (K. Black).

KENTUCKY - Alfalfa weevil damage noted in some alfalfa fields. Several fields in central area treated. Larvae much lighter on alfalfa seeded last fall than in older stands. District> County= larvae per 30 stems and number of fields (f) surveyed week of April 19: C> Hardin= 20-42 in 16f and Meade= 40-50 in 3f; Midwestern> Simpson= 20-80 in unknown f, Todd= 12-90 in 13f, and Union= 2-35 in 14f. Area> status on alfalfa: S> most fields and even some fall-seeded stands reached economic threshold and treated, few larvae almost full grown and preparing to pupate; N> larvae reached damaging levels and treatments applied as weather permitted. (P.E. Sloderbeck).

INDIANA - Economic damage by alfalfa weevil still confined to untreated alfalfa south of U.S. Highway 50 for most part. Infestation increased from 62 to 81%, larvae nearly doubled from 2.5 to 4.7 per stem, alfalfa fields began to look ragged but new growth masks damage to some extent in many fields. Mean height (25.7 cm) 10+ cm taller than mean height past week. Larvae in early instars and daytime sweeping for adults averaged 12.6 per 25 sweeps. District> County= total eggs per 25 stems, predominant instar, mean larvae per stem, mean adults per 25 sweeps, and percent tips infested [mean host height] in 1 untreated alfalfa field for each series, April 22-24: WC> Vigo= 14, 1st to 3rd, 1.4, 7.0, 32% [26 cm] and Vermillion= 0, 1st, 1.0, 0.5, 4% [17 cm] and 0, -, 0, 0.5, [17 cm]; SW> Daviess= 0, 3rd, 2.4, 0, 88% [33 cm], Knox= 0, 3rd, 1.2, 10.8, 96% [31 cm], and Sullivan= 0, 2nd, 4.0, 12.5, 92% [24 cm]; SC> Monroe= 0, 1st to 3rd, 1.2, 2.5, 48% [16 cm], Orange= 5, 3rd, 4.6, 1.5, 88% [19 cm], Harrison= 10, 1st, 6.8, 17.0, 96% [23 cm], and 8, 1st, 3.8, 21.8, 96% [33 cm] in 2 fields, Washington= 5, 2nd, 8.2, no data, 96% [22 cm], 41, 1st, 4.2, 19.5, 100% [30 cm], 0, 1st, 5.4, 17.3, 96% [26 cm], 40, 1st, 5.6, 12.0, 88% [29 cm], and 22, 1st, 7.0, 9.5, 96% [23 cm], Jackson= 43, 1st, 3.4, no data, 72% [36 cm], 0, 1st, 2.4, no data, 32% [27 cm], and 3, 2nd, 1.4, no data, 60% [24 cm]. (R.W. Meyer).

OHIO - Alfalfa weevil adults active in alfalfa in northern area, but only one larva detected. District> County= average egg batch, stems infested with eggs, larval averages per sweep, and adult averages per sweep [host height] April 23-24: C> Union= 0, 0, 0, and 0.047 [14 cm] and 0, 0, 0, and 0.07 [15 cm] on mixed alfalfa and clover; NC> Crawford= 0, 0, 0.003, and 0.027 [13 cm]; and NE>

Wayne= 4, 2, 0, and 0.17 [23 cm]. (G.P. Walker). VIRGINIA - Alfalfa weevil surveys based on 5 samples of 10 tips each of forage legumes. Tip infestation 66% and average estimated defoliation 29%. Five fields (56%) and 54% of acreage exceeded economic threshold. District> County= hectares sampled, number infested per 50 tips, percent infestation, and percent defoliation April 19-24: E> Accomack= 2 ha, 26, 52%, and 5%, and Northampton= 7.3 ha, 38, 76%, and 45%, and 4.9 ha, 50, 100%, and 65%, and 4.0 ha, 50, 100%, and 70%, and 4.0 ha, 22, 44%, and no data (this field treated); W> Botetourt= 6.1 ha, 20, 40%, and 5%; SW> Montgomery= 3 ha, 35, 70%, and 15%, and Pulaski= 3 ha, 42, 84%, and 25%, and 6.5 ha, 16, 32%, and 5%. (W. Hamilton et al.).

EGYPTIAN ALFALFA WEEVIL (*Hypera brunneipennis*) - ARIZONA - District> County= larvae and adults per 100 sweeps of alfalfa: C> Maricopa= 2-80 and 5-30, Pinal= 40-228 and 40-792; and SW> Yuma= 3-40 and 20 per 10 sweeps. (L.G. Blackledge).

CLOVER HEAD WEEVIL (*Hypera meles*) - MISSISSIPPI - District> County= larvae and adults per crimson clover plant: Southeast and Coastal> Stone and Wiggins= 1-3 and 1-2 and Lauderdale= lighter on less mature plants. (M. Ellsberry).

BEAN LEAF BEETLE (*Cerotoma trifurcata*) - ILLINOIS - First adult of season. District> County= status on alfalfa: SW> Johnson= collected in field April 16. (K. Black).

VARIEGATED CUTWORM (*Peridroma saucia*) - OKLAHOMA - District> County= larval averages per 10 sweeps of alfalfa: SC> Stephens and C> Grady= small larvae 10; NE> Wagoner and EC> Muskogee= 1. (D.C. Arnold). KANSAS - Adults sometimes heavy in blacklight traps. District> County= status on alfalfa: NE> Brown= 248 adults trapped April 16; SC> Sedgwick= 188 adults trapped April 18-22 and Kiowa= 107 adults trapped April 18-20; SE> Cherokee, SC> Kiowa and Reno, EC> Chase, and NE> Riley= egg masses in some fields (S.C. White et al.); EC> Shawnee= larvae usually none to trace but up to 32 per 100 sweeps found; and NE> Riley= usually none to trace but up to 30 per 100 sweeps found (K.O. Bell, Jr.). NEBRASKA - First adult of season. District> County= status on forage legumes: E> Lancaster= reported April 22. (Miller).

GREEN CLOVERWORM (*Plathypena scabra*) - OKLAHOMA - First of season. District> County= averages per 10 sweeps of alfalfa: SC> Marshall= 8 in 1 field. (D.C. Arnold).

BLUE ALFALFA APHID (*Acyrthosiphon kondoi*) - ARIZONA - District> County= adults per 100 sweeps of alfalfa: C> Maricopa= 750. (L.G. Blackledge et al.). OKLAHOMA - District> County= new county records on alfalfa: SW> Kiowa= light on April 21, 1979, at Lone Wolf, and Comanche= light on April 21 at Madill, and SC> Johnston= light on April 26 at Mannsville. All collected and determined by R.C. Berberet. Population status in other fields: SW> Kiowa, Jackson, Comanche, Caddo, WC> Washita, SC> Stephens, and C> Grady and Payne= this species made up 75-100% of Acyrthosiphon infestations in all fields checked with counts of 5-10 per 10 sweeps. (D.C. Arnold).

PEA APHID (*Acyrthosiphon pisum*) - ARIZONA - District> County= nymphs and adults per 100 sweeps of alfalfa: C> Maricopa= 60-5,000, Pinal= 362-2,000; and SW> Yuma= 2,000-5,000. (L.G. Blackledge). NEW MEXICO - Light. District> County= counts per 25 sweeps of forage legumes: NE> Quay= averaged 10-30 in Tucumcari area. (C. Heninger).

A LYGUS BUG (*Lygus* sp.) - ARIZONA - District> County= nymphs and adults per 100 sweeps of alfalfa unless stated otherwise: C> Maricopa= 20-100 and 23-375, Pinal= 8-30 and 14-186; and SW> Yuma= 0 and 2 per 10 plants. (L.G. Blackledge).

COTTON

INSECTS

BEET ARMYWORM (*Spodoptera exigua*) - ARIZONA - District> County= egg masses and larvae per 25 cotton plants: C> Maricopa= 2 and 6-8 and SW> Yuma= heavy in some spots. Controls being applied. (J. Kirkpatrick et al.).

MISCELLANEOUS FIELD CROPS

INSECTS

PEA APHID (*Acyrthosiphon pisum*) - ARIZONA - District> County= nymphs and adults per 100 sweeps of safflower: C> Maricopa= 180 at Buckeye. (J.A. Bedford).

POTATOES, TOMATOES, PEPPERS

DISEASES

A LESION NEMATODE (*Pratylenchus* sp.) - OKLAHOMA - District> County= counts per 100 ml of soil around tomato plants: NE> Tulsa= this species and a ROOTKNOT NEMATODE (*Meloidogyne* sp.) 82 and 20, respectively. (K.E. Conway).

INSECTS

COLORADO POTATO BEETLE (*Leptinotarsa decemlineata*) - OKLAHOMA - First of season. District> County= adults on garden potatoes week ending April 20: C> Lincoln= heavy. (D.C. Arnold).

VEGETABLE LEAFMINER (*Liriomyza sativae*) - FLORIDA - Increased beyond threshold levels of 25 mines per 18 leaflets on tomatoes. District> County= mines per 18 leaflets of tomato: S> Manatee= 14 by April 17 and 38 by April 24 in Bradenton area. (F.W. Mead).

COLE CROPS

INSECTS

IMPORTED CABBAGEWORM (*Pieris rapae*) - OHIO - First adults of season. District> County= status on cole crops: C> Union and Marion= flying April 23. (G.P. Walker).

GENERAL VEGETABLES

INSECTS

VARIEGATED CUTWORM (*Peridroma saucia*) - OHIO - First adults of season in BLACK CUTWORM (*Agrotis ipsilon*) pheromone traps April 20 and 23 and in blacklight traps April 25. Last year first adults in light traps May 24. Dissection of females showed they were mated and would soon be laying eggs. (R. Schmidt).

CABBAGE LOOPER (*Trichoplusia ni*) - ARIZONA - District> County= eggs, larvae, and adults on lettuce: C> Maricopa= 26, 18, and 9 per 3.7 row m and Pinal= 23, 14, and 14 per 100 plants. (F. Brooks et al.).

DECIDUOUS FRUITS AND NUTS

DISEASES

CEDAR-APPLE RUST (Gymnosporangium juniperi-virginianae) - KANSAS - Spores detected in all areas except in northeastern area. District> County= status on cedars: SC> Kiowa and Pratt= galls active. (T. Sim, IV).

APPLE SCAB (Venturia inaequalis) - KANSAS - Ascospores released in all areas. (T. Sim, IV).

INSECTS

ORIENTAL FRUIT MOTH (Grapholitha molesta) - KANSAS - First of season. District> County= adults on peach: SC> Sedgwick= taken in pheromone trap in orchard. (M.B. Morris, K.O. Bell, Jr.).

PEACH TWIG BORER (Anarsia lineatella) - COLORADO - District> County= status on peach: Western Slope> Mesa= first overwintering larva noted April 11 in orchard. (A.D. Bulla).

SPRING CANKERWORM (Paleacrita vernata) - OKLAHOMA - District> County= status on apple and cherry trees: C> Payne; NC> Garfield; and NE> Washington= damaged apples; and C> Seminole= damaged apples and cherries. (D.C. Arnold).

PEACHTREE BORER (Synanthedon exitiosa) - OHIO - District> County= status on peach: NC> Ottawa= this species and LESSER PEACHTREE BORER (S. pictipes) damaged every tree examined in orchard. (G.P. Walker).

EASTERN TENT CATERPILLAR (Malacosoma americanum) - SOUTH CAROLINA - District> County= larval status: NW> Cherokee= 3-15 per tree caused light damage to wild cherry among 6.1 ha of young peach trees at Gaffney, April 17. (J.G. Bowman).

A SCOLYTID BEETLE (Xylosandrus crassiusculus) - NORTH CAROLINA - New State record. District> County= collection on plum: Southern Piedmont> Richmond= collected from branch of var. Shirley at Rockingham, April 20, 1979, by M.J. Pate. Determined by D.L. Stephan. (T.N. Hunt).

GREEN PEACH APHID (Myzus persicae) - COLORADO - District> County= status on peaches: Western Slope> Mesa= infestations decreased due to severe over-wintering conditions. Eggs 95% hatched by April 11. Nymphs 2-5 per 100 buds. (A.D. Bulla).

APPLE APHID (Aphis pomi) - OHIO - District> County= status on apple: NC> Ottawa= total of 3 young aphids found after checking many apple twigs [13 cm green to tight cluster stage of bud development] April 24. (G.P. Walker).

EUROPEAN RED MITE (Panonychus ulmi) - OHIO - District> County= status: NE> Wayne= overwintered eggs about 5% hatched (F. Hall), and C> Fairfield= overwintered eggs about 50% hatched, young mites 3-6 per apple leaf [full pink bud development]. Predaceous phytoseiid mites, Zetzellia mali and Amblyseius fallacis, also present. (R.P. Holdsworth).

PECAN NUT CASEBEARER (Acrobasis nuxvorella) - NEW MEXICO - New county record. District> County= collection data from pecans: SE> Lea= infested nuts detected at Lovington, August 20, 1978, by G. Nielsen. Determined by E.L. Todd. (G.L.

Nielsen). OKLAHOMA - First pecan nut casebearer of season. District> County= overwintered larvae in pecans week ending April 20: C> Lincoln= averaged 1 per 50 terminals. (D.C. Arnold).

OTHER TROP. & SUBTROP. FRUITS

INSECTS

LATANIA SCALE (Hemiberlesia lataniae) - CALIFORNIA - District> County= status on olive: San Joaquin Valley> Madera= very heavy on twigs, leaves, and fruit in commercial grove at Madera, heavy enough to totally cover bark on wood 3 cm in diameter. (J. Gilley).

SMALL FRUITS

INSECTS

MEADOW SPITTLEBUG (Philaenus spumarius) - OHIO - Unusually early in season. District> County= status on strawberry: EC> Tuscarawas= detected. (R. Williams).

ORNAMENTALS

INSECTS

MINING SCALE (Howardia biclavis) - FLORIDA - New county record. District> County= adults on Manilkara zapota (a sapodilla plant): S> Hendry= collected from stems near Clewiston about April 17, 1979, by J. Felty, V. Brown, G. Smith, and H. Gillis. Determined by A.B. Hamon. (F.W. Mead).

A DIASPIDID SCALE (Abgrallaspis howardi) - FLORIDA - New county and host record. District> County= adults on Asimina reticulata (seminoletea pawpaw): S> Hardee= collected from stems near Gardner, April 3, 1979, by J.T. Felty. Determined by A.B. Hamon. (F.W. Mead).

FOREST AND SHADE TREES

DISEASES

PINE WOOD NEMATODE (Bursaphelenchus lignicolus) - MISSOURI - District> County= status: C> Howard= new county record. Specimens collected from 1 ornamental Pinus sylvestris (Scotch pine) tree 15-18 years old on horticultural farm at New Franklin, April 26, 1979, by J. Johnson. Determined by A. Foudin. Tree appeared dead. Boone= new sites. Detected at Ashland and at 12 new sites in 24 km circumference around Columbia. All trees, Scotch pines, and appeared dead or dying. (A. Foudin).

INSECTS

ELM LEAF BEETLE (Pyrrhalta luteola) - KANSAS - First egg mass of season. District> County= status on elms: NE> Riley= 1 egg mass at Manhattan (H.E. Thompson); and SC> Kiowa= no eggs or adults at Greensburg (G.A. Salsbury).

FALL CANKERWORM (Alsophila pometaria) - MICHIGAN - District> County= egg mass densities per 0.09 sq m of trunk: C> Midland= as heavy as 65 at Midland, April 17; 100+ eggs in many masses. (M.K. Kennedy, F. Laemmle).

SPRING CANKERWORM (*Paleacrita vernata*) - KANSAS - District> County= status: NE> Riley= larvae (0.318-1.9 cm long) light to moderate on elm, honeylocust, and hackberry at Manhattan and EC> Lyon= scarce on elms at 1 site at Emporia. (K.O. Bell, Jr.)

MAN AND ANIMALS

INSECTS

HORN FLY (*Haematobia irritans*) - OKLAHOMA - District> County= status on beef cattle: NC> Major= 200-300 per head. (D.C. Arnold).

LONE STAR TICK (*Amblyomma americanum*) - MISSOURI - First of season. District> County= adult taken on human: NC> Putnam= 1 male taken. (R.E. Munson).

HOUSEHOLDS AND STRUCTURES

INSECTS

TERMITES - IOWA - First swarms of season. District> County= swarm date: SC> Decatur= Reticulitermes sp. reported March 19. (D.R. Lewis). KENTUCKY - First swarms of season. District> County= swarm date: C> Clinton and Bluegrass> Shelby and Fayette= EASTERN SUBTERRANEAN TERMITE (Reticulitermes flavipes) reported week of April 19. (P.E. Sloderbeck).

BENEFICIAL ORGANISMS & THEIR ENEMIES

INSECTS

AN ICHNEUMONID WASP (*Bathyplectes curculionis*) - OKLAHOMA - District> County= second generation adults per 10 sweeps of alfalfa: SC> Stephens= 10. (D.C. Arnold).

A LADY BEETLE (*Coccinella septempunctata*) - OKLAHOMA - District> County= adults released in alfalfa: NE> Wagoner= about 10,000 each near Choska and Garfield= near Douglas. (D.C. Arnold).

FEDERAL AND STATE PROGRAMS

DISEASES

OAT STEM RUST (*Puccinia graminis* f.sp. *avenae*) widespread and moderately severe in commercial oat [mostly milkt] fields in southern TEXAS, April 11-24. Losses will be moderate to heavy. Oat stem rust rapidly increasing, and should continue to do so with recent rains producing vast quantities of inoculum. (A.P. Roelfs, D. Long).

Little WHEAT STEM RUST (*Puccinia graminis* f.sp. *tritici*) observed on wheat April 11-24. Severely rusted trap plots of 'McNair 701' at Beeville, TEXAS, April 9, but no rust on similar plots at Uvalde and San Antonio, Texas. (A.P. Roelfs, D. Long).

For other cereal rusts see page 228.

INSECTS

CEREAL LEAF BEETLE (Oulema melanopus) - INDIANA - District> County= egg status on wheat: SC> Washington to NW> La Porte in Hudson Township= trace. (M. Holmes). OHIO - Adults active in every wheat field surveyed. Egg laying expected soon. District> County= adult averages per sweep of wheat [host height] April 23-24: C> Union= 0.028 [30 cm] and 0.002 [15 cm] and Marion= 0.003 [26.7 cm]; NC> Crawford= 0.002 [28 cm] and Ashland= 0.018 [23 cm]. (G.P. Walker). MICHIGAN - District> County= status: SW> Berrien= adults collected in winter wheat [early tiller] in Buchanan Township, eggs found in adjacent reed canarygrass. (M.K. Kennedy, F. Laemmle).

GRASS BUGS - NEW MEXICO - District> County= nymphs on crested wheatgrass: NW> Rio Arriba= Labops spp. heavy, 200+ in area near El Vado and Cebolla, controls planned. (G.L. Nielsen). UTAH - First hatching. District> County= status on range: C> Sanpete= Labops hesperius at 2,286 m elevation in Ephraim Canyon, April 21. (B.A. Haws, J. Knight).

GRASSHOPPERS - NEW MEXICO - Hatch underway on rangeland. District> County= average per 0.8 sq m: SE> Lea= Melanoplus occidentalis, mostly 1st instar nymphs, 19 km east of Caprock. (M. Perry). KANSAS - District> County= unspecified grasshopper status on alfalfa: SW> Haskell= hatching (D.E. Mock, D.A. Brenn); SC> Sumner= averaged 10-15 per 0.08 sq m in spots of 1 field, trace in other parts of field (G.A. Salsbury). NEBRASKA - Eggs in good condition and in eyespot stage. District> egg pod eggs 4-5 per 0.09 sq m in rangeland: NW> mostly Ageneotettix deorum up to 4. (Hagen).

PINK BOLLWORM (Pectinophora gossypiella) - ARIZONA - District> County= adults per pheromone trap per 2 days: SW> Yuma= 3 at Wellton. (J. Kirkpatrick et al.).

RANGE CATERPILLAR (Hemileuca oliviae) - OKLAHOMA - District> County= egg clusters per 91.4 m transect in rangeland week ending April 20: Panhandle> Cimarron= 2+ economic, 19 km west of Boise City; infestations very light in same area in 1978. (D.C. Arnold).

SCREWWORM (Cochliomyia hominivorax) - Two cases reported from continental United States, April 1-7 in Texas. Total of 635 cases confirmed in portion of Barrier Zone in Republic of Mexico, March 4 to April 7. Total of 869 cases reported in Mexico south of Barrier Zone. Number of sterile flies released April 1-7 totaled 43,626,240 as follows: Texas 22,945,440; New Mexico 3,920,000; Arizona 16,655,800; California 105,000. Total of 123,131,360 sterile flies released within Barrier of Mexico. (J.E. Novy, M.E. Meadows).

HAWAII PEST REPORT

General Vegetables - ONION THIRIPS (Thrips tabaci) heavy on 0.8 ha of mature bulb onion at Omaopio and Pulehu, Maui. Foliar damage heavy; bulbs unaffected due to age of crop. (L.M. Nakahara). Adults of IMPORTED CABBAGEWORM (Pieris rapae) very heavy in Kula, Omaopio, and Pulehu growing areas of Maui. Heavy winter rains followed by development of alternate hosts such as cruciferous weeds and nasturtiums in wayside areas may have contributed to large numbers. Eggs and 1st instar larvae 100 or more per plant in 4.0-ha planting of head cabbage [pre-heading and heading] at Kula; foliar damage trace. (N. Miyahira, L.M. Nakahara).

THREELINED POTATO BEETLE (Lema trilineata) adults noticeable in wayside areas and on nonhost crops at Omaopio and Pulehu, possibly due to favorable cool conditions and availability of weedy solanaceous hosts. Adults heavy, 3-12 per plant, on 0.8 ha of young potato at Omaopio. No larval damage observed but many eggs freshly laid. (L.M. Nakahara). TOBACCO FLEA BEETLE (Epitrix hirtipennis) adults moderate to heavy, 0-6 per leaf, on 0.8 ha of potato at Omaopio and on 2.4 ha of tomato [height 30 cm] at Pulehu. Foliar damage light to moderate on young tomato and trace on potato. (N. Miyahira, L.M. Nakahara).

Frequent encounters with aphid predators Coelophora inaequalis (common Australian lady beetle) and Coccinella septempunctata bruckii (a lady beetle) in wayside and crop areas indicated POTATO APHID (Macrosiphum euphorbiae) heavy recently in Omaopio, Pulehu, and Kula areas of Maui. Heavy aphid numbers may have been due to winter rains and subsequent weed growth. (N. Miyahira, L.M. Nakahara).

New island record - SPOTTED ALFALFA APHID (Therioaphis maculata) light on weedy Medicago hispida (California burclover) at 1,128 m elevation at Kula, Maui, April 17, 1979. Collected by N. Miyahira and L.M. Nakahara. Determined by S.Y. Higa. (N. Miyahira et al.).

DETECTION

NEW STATE RECORD

INSECTS

A SCOLYTID BEETLE (Xylosandrus crassiusculus) - NORTH CAROLINA - Richmond County. (p. 237).

NEW COUNTY AND ISLAND RECORDS

DISEASES

PINE WOOD NEMATODE (Bursaphelenchus lignicolus) - MISSOURI - Howard. (p. 238).

INSECTS

BLUE ALFALFA APHID (Acyrthosiphon kondoi) - OKLAHOMA - Kiowa, Comanche, and Johnston. (p. 235).

A DIASPIDID SCALE (Abgrallaspis howardi) - FLORIDA - Hardee. (p. 238).

A DIASPIDID SCALE (Aonidomytilus hyperici) - FLORIDA - District> County= collection data on Hypericum fasciculatum: S> Martin= collected from stems, blooms, and leaves on 3 plants on ditchbank next to nursery at Stuart, March 16, 1979, by E.W. Campbell. Determined by A.B. Hamon (E.W. Campbell).

A MEALYBUG (Paradoxococcus mcdanieli) - FLORIDA - District> County= collection data on unknown grass: S> Palm Beach= adults infested roots of grass growing wild in environs of nursery at Boynton Beach, March 28, 1979, by W. Churchill and E. Nickerson. Determined by A.B. Hamon. (W. Churchill).

MINING SCALE (Howardia biclavis) - FLORIDA - Hendry. (p. 238).

PECAN NUT CASEBEARER (Acrobasis nuxvorella) - NEW MEXICO - Lea. (p. 237).

SPOTTED ALFALFA APHID (Therioaphis maculata) - HAWAII - Maui. (p. 241).

LIGHT TRAP COLLECTIONS

Pest Interceptions of Quarantine Significance at Ports of Entry

Plant Importation and Technical Support Staff
Plant Protection and Quarantine Programs, USDA

<u>Life Stage</u>	<u>Host</u>	<u>Probable Origin</u>	<u>Port of Entry</u>	<u>Desti-nation</u>
<u><i>Coenorrhinus</i> sp. a weevil</u> Det. D.R. Whitehead	adult with seeds of <u><i>Prunus</i></u> from baggage	Israel	Kennedy	OH
<u><i>Dactylotrypes longicollis</i> (Wollaston) a scolytid beetle</u> Det. D.M. Anderson	adult	in seeds of <u><i>Chamaerops</i></u> from cargo	Italy	Los Angeles CA
<u><i>Giraudiella inclusa</i> (Frauenfeld) a cecidomyiid midge</u> Det. R.J. Gagné	larval adult	in reed mats from cargo	Austria	Houston TX
<u><i>Lamprodes boeticus</i> (Linnaeus) bean butterfly</u> Det. D.M. Weisman	larval	in string beans from baggage	Philippines	Seattle WA
<u><i>Monochamus alternatus</i> Hope a cerambycid beetle</u> Det. T.J. Spilman	adult	in wood crates of screens	Hong Kong	New York NY
<u><i>Platypus</i> sp. a platypodid beetle</u> Det. D.M. Anderson	adult	in Dunnage with tractor parts	Japan	San Francisco CA
<u><i>Prays fulvocanellus</i> (Walsingham) an ermine moth</u> Det. D.M. Weisman	larval pupal	in <u><i>Pelea</i></u> fruit from baggage	Hawaii	Honolulu CA
<u><i>Selenophthalmus euryae</i> (Takahashi) a diaspodid scale</u> Det. S. Nakahara	adult	on mangoes from baggage	Philippines	Chicago IL

SUMMARY OF PEST CONDITIONS IN THE UNITED STATES - 1978
(Continued from page 219)

DECIDUOUS FRUITS AND NUTS

Highlights

WINTER MOTH was recorded for the first time in the United States in Oregon and Washington. Heavy overwintering egg masses of EASTERN TENT CATERPILLAR indicate potential for severe infestations on apple in Kentucky and Virginia in 1979. PEAR PSYLLA overwintered in heavy numbers in Oregon and Washington.

DISEASES

Rainy weather in April and May was conducive to development of apple fruit diseases in KANSAS; however, disease development was not as severe as in 1977. The major apple diseases were APPLE SCAB (*Venturia inaequalis*) and CEDAR-APPLE RUST (*Gymnosporangium juniperivirginianae*) in the apple production areas of northeastern and south-central Kansas.

STONE FRUIT BACTERIAL CANKER (*Pseudomonas syringae*) was one of the most common peach diseases in KANSAS. Infections were also active on cherry, nectarine, plum, and wild plum. Entire trees died in some orchards.

Isolated incidences of TEXAS ROOT ROT (*Phymatotrichum omnivorum*) affecting pecan trees in NEW MEXICO were found at Hatch and Las Cruces, Dona Ana County, NEW MEXICO, in October.

INSECTS

WINTER MOTH (*Operophtera brumata*) was confirmed in OREGON for a new United States record at Portland, Multnomah County, where 2 lots of males were collected. See CPPR 3(44-47):618. Delimiting surveys in late November and December showed that the infestation was widespread in the Portland metropolitan area extending north to the Columbia River, east to Gresham, west to Hillsboro (Washington County) and south to Sherwood. Females were taken primarily on apples, but were also found on filberts as well as a wide variety of ornamentals including crabapples, flowering plums and cherries, maples, mountain ash, and rhododenrons.

Winter moth was collected in WASHINGTON using sticky traps at Vancouver, Clark County, and at Friday Harbor on San Juan Island, San Juan County, for new State and county records. Collections were made from cherry, plum, and apple trees. See CPPR 3(48-52):678.

SPRING CANKERWORM (*Paleacrita vernata*) in KENTUCKY heavily defoliated cherry trees in an area about 50 km (30 miles) long and 0.8 km (0.5 mile) wide along a ridge near Lynch in Harlan County. It is possible that FALL CANKERWORM (*Alsophila pometaria*) also contributed to the damage.

COLDING MOTH (*Laspeyresia pomonella*) emergence was generally on schedule in the Willamette Valley of OREGON. Cool wet weather in late April slowed down a season that was 1-2 weeks ahead of normal. The first males were trapped April 27 and populations peaked during the third week of June. In the Hood River

Valley, the first emergence of codling moth was noted on May 8. The first entries were noted at lower elevations in June. An increase in pear infestation was noted where treatments for another pest were relied upon for control during the cover season.

Codling moth populations were lighter than normal throughout WASHINGTON, except in the Wenatchee area, Chelan County, where some orchards were damaged. Cool spring temperatures extended the first generation brood flight into July in the Yakima Valley. Pheromone traps at Green Bluff, Spokane County, and in Grant and Adams Counties recorded peak flights in early June. Thereafter, the populations decreased due to control programs. Adult emergence in IDAHO was normal, however, the practice of 2 cover sprays in Payette County caused serious damage to many apple blocks.

The first codling moth of the 1978 season in WISCONSIN was taken in a Door County pheromone trap on June 5 and the first moth in Dane County was found at a light on June 6. Larvae were not a serious problem in well-managed orchards, but in late August a wild, untreated tree in Crawford County and Columbia County had 60% and 80% of the fruit infested, respectively.

FALL WEBWORM (*Hyphantria cunea*) eggs were observed in ARKANSAS on leaves of persimmon trees in Washington County (northwest) in late June. Larvae were observed on redbud and hickory foliage in the northwest by mid-late July. By September 1, trees up to 6 m (20 ft) tall had been completely defoliated in the northwestern area. Fall webworm larvae were very heavy on apple, plum, pecan, and a great many other trees in Accomack County. This is the second generation which has caused damage to trees in the area.

EASTERN TENT CATERPILLAR (*Malacosoma americanum*) larvae hatched from egg masses in early April in ARKANSAS and tentlike nests were moderately abundant, especially in wild cherry trees, throughout the central area. Egg deposition during mid-June was unusually heavy on home fruit trees (plum, cherry, etc.) in the northern area.

Eastern tent caterpillar eggs in KENTUCKY were beginning to hatch by the end of March. By mid-April, larvae were about 13 mm (0.5 in) long and defoliation was becoming noticeable on wild cherry trees. Population levels were about the same as in 1977 with tents averaging about 4 per tree. Complete defoliation of wild cherry trees was common by late April. Larvae began looking for pupation sites during early May. The peak adult flight occurred in early to mid-June. The large number of overwintering egg masses present on wild cherry trees indicate that outbreak populations may occur in 1979 which may also damage apple trees and other secondary hosts.

Eastern tent caterpillar egg masses in VIRGINIA were reported from Henrico County on January 23. By March, larvae were noted hatching statewide and were moderately heavy in Montgomery County. First instar larvae were collected on crabapple in the City of Suffolk, March 28. Severe infestations with an average of 4 tents on wild cherry were reported in the Independent City of Suffolk, Nansemond County, April 4. By April 11, feeding on wild cherry was reported throughout Amelia County. Extremely severe infestations were reported in the eastern area by April 21.

Heavy eastern tent caterpillar infestations were reported from New Kent and Westmoreland Counties, Virginia. Most of the damage was confined to wild cherry. In early May, populations continued to be very heavy statewide.

Reports from the eastern area indicated that larvae that initially hatched on wild cherry had completely defoliated the initial host tree, and were migrating in search of additional food plants. Damage to ornamentals, including roses, was spotty but concern by homeowners was high. Populations were heavy in the mountain areas, commonly averaging 3-10 tents per large wild cherry tree. Multiple egg masses were found on a number of individual branches of apple trees from Lancaster County in mid-July. This indicated that the potential for a severe infestation is present for 1979.

Eastern tent caterpillar eggs in PENNSYLVANIA hatched in early April in the southeastern counties. By April 13, tents (3 cm (1 in) across) were present on cherry trees. By early May, the larvae had completely defoliated cherry trees in the southeastern area, and the number of tents and degree of defoliation were heavier than for the past several years. The first adults were reported in mid-June and adult activity continued through the end of July.

SHOTHOLE BORER (*Scolytus rugulosus*) continued to damage peach trees in SOUTH CAROLINA. Heavy infestations resulted in tree loss. Postharvest spray program and burned brush piles achieved good control.

TENLINED JUNE BEETLE (*Polyphylla decemlineata*) seriously damaged trees in a 12-year-old sweet cherry orchard in western Canyon County, IDAHO. Trees killed or weakened by larvae girdling the trees underground had to be removed.

First APPLE MAGGOT (*Rhagoletis pomonella*) adults of the season in WISCONSIN were reported in early June in Ashland County. Catches were made at other sites throughout the season and continued into early September. Dissection of apples from wild, untreated trees in Crawford and Columbia Counties in late August revealed more than 80% of the apples infested. In NEW HAMPSHIRE, the first apple maggot adults were collected at Wilton, Hillsborough County, and Londonderry, Rockingham County, on July 11-12 from sticky board traps. Adult activity continued during July and August. Because of warm dry weather in September, females laid eggs longer than usual, past the time when control measures are discontinued. Orchards where sprays were discontinued in September lost about 6-8% of the crop late in September, particularly in the southeastern area.

WESTERN CHERRY FRUIT FLY (*Rhagoletis indifferens*) populations were light in WASHINGTON. Few flies were caught at Green Bluff, Spokane County, and no flies were recorded in traps in Grant and Adams Counties. First emergence in the Yakima Valley was recorded on May 19 in Grandview. Neither Yakima nor the Grant and Adams growing areas reported infested fruit.

PEAR PSYLLA (*Psylla pyricola*) activity in OREGON occurred very early due to mild December and January temperatures. Overwintering populations in Jackson County were heavy, up to 20-35 per tray. The first eggs were found in pear orchards on January 18, the earliest date ever recorded. Egg deposition began in the Willamette Valley in mid-February. First eggs were found in Hood River County on February 10, nearly a record early date for that area. Nymphs hatched March 24. First generation, summer adults completed development by the end of April. Most mid-Columbia pear orchards came through the harvest season with little problems although some late summer flareups occurred in Jackson County. Warm October weather conducive to population escalation resulted in heavy overwintering densities, 25-30 adults per tray, at Hood River the fall of 1978.

Pear psylla populations were generally light throughout the pear regions of WASHINGTON. Yakima Valley reported a light spring population and generally light levels during the growing season. There was a sharp increase in numbers postharvest, with heavy numbers continuing into winter.

Pear psylla adults and eggs were observed on April 10 in Wayne County, NEW YORK. Egg laying continued at a slow rate until the week ending April 29 in the Lake Ontario fruit belt. First eggs hatched April 28 in Ulster County and May 14 in the Ontario fruit belt. Interbrood period was reported for the Hudson Valley the week ending May 25. First generation adults, egg laying, and 1st and 2nd instar nymphs were reported for the Hudson Valley the week ending June 16. Hatch along the Ontario fruit belt was reported June 22. Third brood egg hatch was observed for the Hudson Valley the week ending July 21.

GREEN PEACH APHID (*Myzus persicae*) damaged peaches and nectarines in the Yakima Valley, WASHINGTON. Fruit injured in early stages of development became malformed. Chemical control was variable. Damage appears to be on the increase.

ROSY APPLE APHID (*Dysaphis plantaginea*) damage and crop loss in IDAHO was severe in apple blocks where dormant spray was omitted or poorly applied.

APPLE APHID (*Aphis pomi*) infested apples in early spring in Yakima Valley, WASHINGTON, due to the extended cool weather which increased populations. Repeated spraying was required to achieve control.

EUROPEAN FRUIT SCALE (*Quadraspidiotus ostreaeformis*), first recorded in 1977, is now known to be more widely distributed in OREGON in the Parkdale area of Hood River County. Only Newton apples have been identified as hosts. Scales can be kept off the fruit but treatments to reduce trunk populations remain unsatisfactory.

WHITE PEACH SCALE (*Pseudaulacaspis pentagona*) continues to spread through peach orchards in SOUTH CAROLINA. Omission of dormant oil sprays and use of concentrate sprays during the growing season contributed to the problem.

GRAPE MEALYBUG (*Pseudococcus maritimus*) infestations were widespread in pear orchards in the central WASHINGTON counties of Chelan, Douglas, and Okanogan. Control methods have proven unsuccessful. This pest has been present for several years but at much lighter levels.

GREEN STINK BUG (*Acrosternum hilare*) and TARNISHED PLANT BUG (*Lygus lineolaris*) are 2 catfacing insects that caused heavy losses to peaches and apples in SOUTH CAROLINA.

MCDANIEL SPIDER MITE (*Tetranychus mcdanieli*) and EUROPEAN RED MITE (*Panonychus ulmi*) were a problem in WASHINGTON in several interplanted apple and pear blocks or on apples adjacent to pears in the Wenatchee area, Chelan County. This outbreak could be generally associated with elimination of predators by treatments to control PEAR PSYLLA (*Psylla pyricola*).

APPLE RUST MITE (*Aculus schlechtendali*) caused much russetting of apple leaves while PLUM RUST MITE (*A. fockeui*) created similar symptoms on commercial prunes in western OREGON.

Very heavy PECAN NUT CASEBEARER (*Acrobasis nuxvorella*) populations of the first generation severely damaged poorly treated and untreated pecan trees in TEXAS. Second generation damage was heavier than normal. The first eggs in

OKLAHOMA were found in Love County on May 22. Counts were generally light through May 29 but from May 30 to June 7, egg counts of 10-30% were found in many areas checked. First generation damage to untreated pecans ranged 15-70% in many areas. Adults were active by the middle of July in Payne County.

PECAN WEEVIL (*Curculio caryae*) emergence in OKLAHOMA began at the end of July in the south-central counties and controls were needed by the second week of August in parts of this area. Very little adult emergence in pecans occurred in the northeastern area until the last week of August. First captures of adult weevils in pecans in MISSISSIPPI occurred on August 10 in Monroe County (3 weevils from 10 cone emergence traps), August 22 in Wilkinson County (3 weevils from 12 traps), and August 22 in Winston County (2 weevils from 6 traps). Emergence and damage were about 10 days later in 1978 than in 1977. A decrease in weevil population was observed compared to 1977. A good pecan crop was produced. Populations decreased by late October.

GREEN STINK BUG (*Acrosternum hilare*) and TARNISHED PLANT BUG (*Lygus lineolaris*) damaged pecans in SOUTH CAROLINA. Early infestations caused heavy nut drop in some areas.

FILBERT BUD MITE (*Phytocoptella avellanae*) and an ERIOPHYID MITE (*Cecidophyopsis vermiciformis*) in western OREGON caused bud deformation and destruction on both wild *Corylus* and the commercial filbert pollinator, Daviana. The commercial variety, Barcelona, was not readily infested by these mites.

CITRUS

DISEASES

GREASY SPOT (*Mycosphaerella citri*) continued to be the main pest of citrus in FLORIDA.

INSECTS

CITRUS SNOW SCALE (*Unaspis citri*) populations in FLORIDA continued to decrease on citrus where the parasite *Aphytis lingnanensis* (a eulophid wasp) has done well. This scale was a little above average where the parasite has yet to be released. The parasite usually does well except where disrupted by chemicals, primarily sulphur sprays.

COTTONYCUSHION SCALE (*Icerya purchasi*) in ARIZONA started showing up on citrus in Pinal County in October. Applications of pesticide to control the scale began in late October and populations were reduced to only a few crawlers. A total of 2 applications of pesticide was used. Good control was obtained and there was no loss in yield.

CITRUS THIRIPS (*Scirtothrips citri*) in ARIZONA caused chemical controls to be applied to 14,164, of 22,662 ha (35,000 of 56,000 acres) of citrus grown. Two applications were necessary at a total cost of \$500,000. Controls were effective with no loss of yield, but some reduction in grade for scarred fruit. Adults started showing up in Maricopa and Yuma Counties in early May. In mid-May controls were being applied in Yuma and Maricopa Counties, and populations were reduced to a light level. Populations began building up and were damaging larger fruit in Yuma in July. A second application of pesticide again reduced the counts to a low level.

CITRUS RUST MITE (Phyllocoptrus oleivora) continued to be the main arthropod pest of citrus in FLORIDA. In general, populations were normal in 1978.

SMALL FRUITS

INSECTS

A GEOMETRID MOTH (Glena cognataria) became a severe pest of blueberries in Milton, Strafford County, NEW HAMPSHIRE. No accurate estimate of injury was obtained in 1978.

GRAPEVINE LOOPER (Eulythis diversilineata) larvae in PENNSYLVANIA damaged 1.0-10.7% of the leaves in almost all of the grape vineyards in Erie County in mid-June.

Larvae of GEOMETRID MOTHS (Itame sulphurea and Ematurga amitaria) infested about 40 ha (100 acres) of cranberries in central WISCONSIN with 8.1 ha (20 acres) destroyed. The green species was predominant.

Larvae of a NOCTUID MOTH (Diarsia rosaria) in WASHINGTON caused a serious problem in raspberries in Whatcom County. Night collections revealed 1-2 fully grown larvae per hill, a sufficient number to reduce yield 50%.

EIGHTSPOTTED FORESTER (Alypia octomaculata) larvae infested over one-half of the grape vineyards in Erie County, PENNSYLVANIA, in late June, with 0.3-6.0% of the leaves being damaged.

ORANGE TORTRIX (Argyrotaenia citrana) larvae were a major insect contaminant of caneberries harvested in the northern Willamette Valley of OREGON. Flight activity peaked in mid-May. Larvae were prevalent in fields throughout the harvest period of raspberries, boysenberries, Marion berries, and blackcaps.

Orange tortrix trapping in WASHINGTON was initiated in 1978 in raspberry fields in Pierce, Cowlitz, and Clark Counties. Numbers were heavy in April in Pierce and Cowlitz Counties, tapering off until trapping was discontinued in August. Populations in Clark County were moderate. There was no correlation between adults trapped and larval infestations. Few larvae were found in fields where trapping took place. Larvae are an increasing contamination problem at raspberry processors.

GRAPE BERRY MOTH (Endopiza viteana) infested about one-half of the grape vineyards at harvest in Erie County, PENNSYLVANIA. Of those infested, 0.2-2.9% of the clusters were damaged.

GRAPE CANE GALLMAKER (Ampeloglypter sesostris) infested two-thirds of the grape vineyards in Erie County, PENNSYLVANIA, in mid-June. Adults damaged an estimated 0.8-4.0% of the shoots.

WESTERN RASPBERRY FRUITWORM (Byturus bakeri) larvae in WASHINGTON were detected frequently in raspberries at processors in Whatcom and Skagit Counties. Several growers in Pierce County reported extensive leaf damage by adults.

STRAWBERRY APHID (Chaetosiphon fragaefolii) was first noted in Washington County, OREGON, strawberry fields on February 28. Early March survey revealed a uniform distribution of apids in most plantings with adults averaging 3-5 per 100 leaves. Severe viral infection in 1977, and the threat of spread this year, prompted many growers to apply aphid controls. These

treatments were thought responsible for much reduced nymphal populations of the MEADOW SPITTLEBUG (Philaenus spumarius) which averaged 1 per 4-5 plants as compared with 3-5 per plant recorded in past years.

Population of a LEAFHOPPER (Erythroneura comes) in PENNSYLVANIA peaked in late August with almost all grape vineyards showing infestation in Erie County. Between 0.2 and 41.3% of the leaves in infested vineyards harbored nymphs and adults.

GRAPE BLOSSOM MIDGE (Contarinia johnsoni) infestations in PENNSYLVANIA peaked about mid-June in Erie County, with about one-half of the grape vineyards infested. In those vineyards, 0.2-21.5% of the blossom clusters showed larval damage.

A WEBSPINNING SAWFLY (Pamphilus sitkensis) which normally feeds on thimbleberry, was found infesting Munger black raspberry in Washington County, OREGON, in late May. Up to 80 larvae per hill occurred locally. This is the first known record of this hymenopteran attacking berry crops in Oregon.

Overwintering TWOSPOTTED SPIDER MITE (Tetranychus urticae) females broke diapause in mid-February in the northern Willamette Valley of OREGON in raspberry and strawberry fields. Large numbers remained in protected areas on the canes rather than moving to the soil as normally occurs. Warm February temperatures caused early movement back onto the canes and young foliage was severely damaged. In some fields all spring growth was destroyed and growers had to apply insecticides to protect their berry crops. Postharvest treatments were also needed to control late season buildups.



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1 m	= 3.28084 ft = 1.09361 yd
1 km	= 0.621371 mi
1 sq cm	= 0.155000 sq in
1 sq m	= 10.7639 sq ft = 1.19599 sq yd
1 ha	= 2.47104 acres
1 sq km	= 0.386101 sq mi
1 kg	= 2.20462 lb
1 t (metric ton)	= 1.10231 short ton
1 kg/ha	= 0.892183 lb/acre
1 t/ha	= 0.446091 ton/acre

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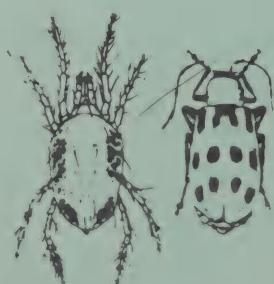
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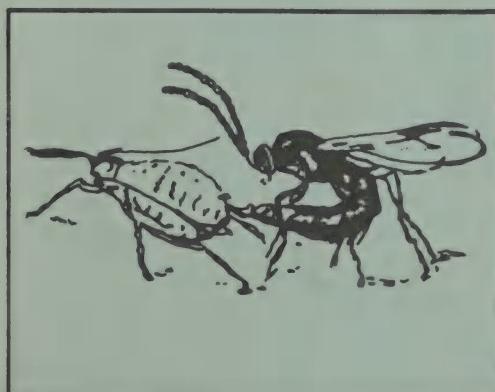
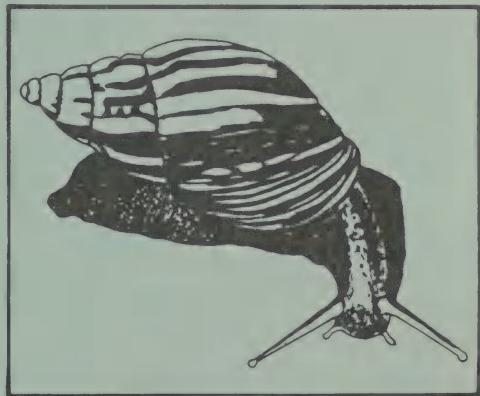
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PROCUREMENT STATION



This publication is distributed weekly to Federal and State agencies, universities, farmers, and others interested in containing or controlling pests in the United States.

Data included in this publication are compiled from reports submitted by cooperating State, Federal and other agricultural and industrial specialists. Accuracy of the reports is not verified prior to publication.

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Correspondence should be directed to:

CPPR

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Hyattsville, Maryland 20782

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COOPERATIVE PLANT PEST REPORT

HIGHLIGHTS

Current Conditions

Overwintered EUROPEAN CORN BORER larvae much heavier than normal in Wisconsin but most corn will be planted late. (p. 253).

Detection

A MEALYBUG is new for Oklahoma. (p. 260).

For new county records see page 262.

Some First Occurrences of the Season

EUROPEAN CORN BORER adults in Missouri. BLACK CUTWORM adults in Nebraska. WHEAT LEAF RUST in Kansas and Iowa. ARMY CUTWORM damage in Montana. ARMYWORM eggs and larvae in Kentucky and larvae in Missouri. POTATO LEAFHOPPER adults in Illinois. ASPARAGUS BEETLE and SPOTTED ASPARAGUS BEETLE in Oregon. ORIENTAL FRUIT MOTH in New York. PEAR PSYLLA and ROSY APPLE APHID nymphs and BLACK VINE WEEVIL in New York.

Special Reports

Summary of Pest Conditions in the United States - 1978
Ornamentals (p. 265).

Forest Insect and Disease Highlights (p. 265-268).
Forest and Shade Trees (p. 269-272).

Reports in this issue are for the week ending May 4 unless otherwise indicated.

CONTENTS

Corn, Sorghum, Sugarcane Insects.....	253	Potatoes, Tomatoes, Peppers Insects.....	258
Small Grains Diseases.....	253	Beans and Peas Insects.....	258
Insects.....	254	Cucurbits Insects.....	258
Turf, Pastures, Rangeland Insects.....	254	General Vegetables Insects.....	258
Forage Legumes Diseases.....	254	Deciduous Fruits and Nuts Insects.....	259
Insects.....	255	Ornamentals Insects.....	259
Soybeans Diseases.....	257	Forest and Shade Trees Insects.....	259
Cotton Insects.....	257	Man and Animals Insects.....	260
Sugar Beets Insects.....	258	Stored Products Insects.....	260
Miscellaneous Field Crops Insects.....	258		
Beneficial Organisms and Their Enemies Diseases.....	260		
Federal and State Programs Diseases.....	260		
Insects.....	260		
Hawaii Pest Report.....	261		
Detection.....	262		
Light Trap Collections.....	263		
Pest Interceptions of Quarantine Significance at Ports of Entry.....	264		
Summary of Pest Conditions in the United States - 1978			
Ornamentals Insects.....	265		
Slugs and Snails.....	265		
Forest Insect and Disease Highlights.....	265		
Forest and Shade Trees Diseases.....	269		
Insects.....	269		

CORN, SORGHUM, SUGARCANE

INSECTS

EUROPEAN CORN BORER (*Ostrinia nubilalis*) - MISSOURI - First adult of season. Area> status on corn: Southeastern> first emerged May 1. (R.E. Munson). WISCONSIN - Some corn is planted and will be highly susceptible to first generation infestations. Most corn will be planted later than in 1978 based on degree-day accumulation above base 10°C since March 1. Late planting will tend to suppress number of first generation larvae in corn. Area> overwintered larval survival: Southern> 80% (64-100%) in 14 fields, about 10% lighter than anticipated in spite of heavy insulating snow cover. Lighter survival may be due to fungal infection of larvae in some fields. Number of successfully overwintered larvae much heavier than normal and adequate to cause problems if weather and crop conditions are right. (O.L. Lovett).

OHIO - District> County= European corn borer status in corn: SE> Washington= larvae in 20% of old cornstalks, no pupae. (G.P. Walker).

BLACK CUTWORM (*Agrotis ipsilon*) - NEBRASKA - First adults of season. District> County= collection dates from corn and sorghum: E> Lancaster= April 30 and NE> Dixon= May 1. (Miller, Jarvi). IOWA - District> County= light trap catches April 24-30: NC> Hancock and SC> Ringgold= adults averaged less than 1 per night at Kanawha and Beaconsfield, respectively, probably due to very cool evening temperatures. (L. Townsend). OHIO - Adult catches increased, especially in pheromone traps. District> County= adults in traps April 25 to May 2: NE> Wayne= 42 in 4 traps, C> Knox= 50 in 5 traps, and NC> Ashland= 144 in 10 traps. (S. Clement et al.).

CORN ROOTWORMS (*Diabrotica* spp.) - WISCONSIN - Egg counts last fall about one-half the average for last 5 years (eggs 5.8 per 0.6 L of soil) in 1978 compared to 5-year average of 10.8 per 0.6 L. Eggs heavy in about 1 field in 6 in major corn-growing counties in spite of generally lighter counts. District> County= overwintered egg survival: C> Juneau, EC> Calumet, and SE> Walworth= projected to be about average (75%) based on partly completed laboratory studies. (O.L. Lovett).

SOUTHERN CORN BILLBUG (*Sphenophorus callosus*) - NORTH CAROLINA - Adult damage to corn increased. Area> status: Southern Coastal Plain> damage 40-50% in scattered fields, and Central Coastal District> Johnston County= most northern area with damage, damage concentrated along ditchbanks and woods. (T. Hunt).

CHINCH BUG (*Blissus leucopterus leucopterus*) - MISSISSIPPI - District> County= nymphs and adults on corn: SC> Pike= heavy on corn [seedling], controls not applied. (J. Jarratt).

SMALL GRAINS

DISEASES

WHEAT LEAF RUST (*Puccinia recondita* f.sp. *tritici*) - KANSAS - First of season. Some spores may have overwintered. District> County= prevalence in 1 wheat field: EC> Douglas= trace, additional surveys to southern State border negative in other fields. (T. Sim, IV). IOWA - First of season. Development of winter wheat late due to prolonged snow cover followed by cool, continuous rains. District> County= status on wheat: SW> Taylor= infected lower leaves of plants [tillering]. (D.J. Williams).

WHEAT POWDERY MILDEW (Erysiphe graminis f.sp. tritici) - KANSAS - District> County= status on wheat: NE> Pottawatomie; EC> Douglas, Franklin, Anderson; and SE> Allen, Woodson, and Greenwood= prevalence increased. (T. Sim, IV).

SPECKLED LEAF BLOTCH (Septoria tritici) - KANSAS - This disease and TAN SPOT (Pyrenophora trichostoma) continued most common foliar wheat pathogens statewide. Prevalence trace to 100% in most areas, variable from field to field. (T. Sim, IV).

CEPHALOSPORIUM STRIPE (Cephalosporium gramineum) - KANSAS - District> County= prevalence on wheat: C> McPherson= 2-95% in 3 fields. (T. Sim, IV).

INSECTS

ARMY CUTWORM (Euxoa auxiliaris) - MONTANA - First report of damage. District> County= status week ending April 27: SC> Carbon= larvae about 3 cm long fed on small area of winter wheat at Bridger. (G.L. Jensen). NEBRASKA - District> County= half-grown larval status on wheat: SW> trace in 1 field, no economic damage. (Campbell).

BLACK CUTWORM (Agrotis ipsilon) - NORTH CAROLINA - Area> damage on small grains: South-central Piedmont> less than 5% of plants cut, but with damage expected to increase as larvae approach full growth in cool, wet areas of scattered fields. (T. Hunt).

ARMYWORM (Pseudaletia unipuncta) - KENTUCKY - First eggs and larvae of season. District> County= status on small grains: Midwestern> Christian= found April 24. (D.E. Foster).

TURF, PASTURES, RANGELAND

INSECTS

ARMYWORM (Pseudaletia unipuncta) - MISSOURI - First larvae of season. Area> status on fescue and orchard grass: Southeastern> small larvae (2) in 1 pasture by May 2. (R.E. Munson).

BRONZED CUTWORM (Nephelodes minians) - OKLAHOMA - District> County= counts per 0.09 sq m of lawn: NE> Wagoner= 1-6 in 1 area. (D.C. Arnold).

FORAGE LEGUMES

DISEASES

SPRING BLACK STEM (Phoma medicaginis) - KANSAS - Continued to affect first alfalfa growth statewide. District> County= prevalence/severity on alfalfa [host height] defoliation at every survey site: EC> Geary= 100%/light [38 cm], Wabaunsee= 60%/moderate [36 cm]; NE> Atchison= 90%/moderate [38 cm]; C> Dickinson= 30-100%/moderate [30-46 cm], Saline= 50-100%/moderate [36-61 cm], and McPherson= 100%/moderate [46 cm]; and WC> Scott and SW> Finney= 100%/no data. (T. Sim, IV).

LEPTO LEAF SPOT (Leptosphaerulina briosiana) - KANSAS - Continued to affect first growth statewide. District> County= prevalence/severity on alfalfa [host height] defoliation at every survey site: EC> Geary= none seen [38 cm], and Wabaunsee= 100%/light [36 cm]; NE> Atchison= 10%/light [38 cm]; and C> Dickinson= 10%/light [30-46 cm], Saline= 5%/light [36-61 cm], and McPherson= 85%/light [46 cm]. (T. Sim, IV).

ALFALFA DOWNTY MILDEW (*Peronospora trifoliorum*) - KANSAS - District> County= prevalence on alfalfa: WC> Scott and SW> Finney= observed in several fields, up to 50% in 1 field and NE> Pottawatomie= trace in 1 field. (T. Sim, IV).

INSECTS

ALFALFA WEEVIL (*Hypera postica*) - UTAH - Adults seriously damaged alfalfa at Hurricane. District> County= status: S> Washington= adults 30 per sweep in some fields at Hurricane, some controls applied (R. Chase, J.B. Karren) and N> Cache= eggs laid every warm day, no larvae found (D.W. Davis). COLORADO - District> County= adult status: N> Larimer= overwintering adults active. (W.M. Hantsbarger).

OKLAHOMA - District> County= alfalfa weevil status on alfalfa: SW> Caddo and WC> Washita and Custer= larvae infested 30-60% of terminals in uncut alfalfa; NE> Wagoner and EC> Muskogee= larvae up to 100 per 10 sweeps in some fields; SE> McCurtain= terminal infestations averaged 20%; SC> Stephens= eggs averaged 8 per 0.09 sq m April 26 and Johnston= terminal infestations 30-60% with about 10% prepupae in cocoons; and C> Grady= eggs averaged 11 per 0.09 sq m April 26. (D.C. Arnold). MISSOURI - Area> tip damage on forage legumes: Northern> 25% in 1 of 15 fields and south-central> 25+% in 3 of 12 fields (counts heavy). (R.E. Munson).

WISCONSIN - Alfalfa weevil problems expected on alfalfa in much the same areas as in 1978. New "hotspots" expected to develop. First damage will begin with 149-204 weevil degree-days C accumulation. District> County= weevil degree-day accumulation (threshold base 8.9°C) March 1 to May 2: SC> Dane= 41.11° at Madison, SE> Washington= 31.7° at Hartford, EC> Outagamie= 18.30 at Appleton, WC> Dunn= 35.6° at Menomonie, SW> Grant= 37.2° at Lancaster, and C> Waushara= 36.1° at Hancock. (O.L. Lovett).

TENNESSEE - Most controls applied for alfalfa weevil effective. Infestations heavy. First alfalfa cutting began as weather permitted. Area> status: Middle Tennessee> some yield loss. (M. Cooper).

ILLINOIS - Area> alfalfa weevil status on alfalfa: As far north as State Highway 15> damage economic, larvae averaged 83 per 30 stems [averaged 30 cm tall], average percent tip feeding 38% in 5 fields May 1 in Washington County; farther north to about U.S. Highway 136> damage decreased, larval activity just starting. Temperatures remained cool and economic damage not expected by May 7 or 8 to occur farther north than line approximated through Hardin, Calhoun County (WSW), Effingham, Effingham County (ESE), and Lawrenceville, Lawrence County (ESE), except in occasional fields. District> County= degree-day accumulation (base 8.9°C): NW> Winnebago= 58.9° at Rockford, W> Adams= 158° at Quincy, C> Mason= 115° at Kilbourne, and E> Champaign= 117° at Urbana. (K.D. Black).

INDIANA - District> alfalfa weevil status on alfalfa: Central districts> larvae near economic levels in some fields south of Indianapolis, early instar larvae about 2 per infested stem on 24-80% of stems [19-38 cm tall], damage appears minimal, growth will probably mask much of damage, infestation ranged 0-12% north of Indianapolis; and southern districts> pressure still increased, eggs almost 70 per 15 sq cm April 22 in 1 field regularly checked and averaged up to 3 per stem in another south-central field, May 2 (first count made using a blender; second by field counts), larvae averaged 9.2 per stem in 1 untreated Franklin County field and prepupae occasional in Harrison County. (R.W. Meyer).

OHIO - Alfalfa weevil larvae heavy in southern area, some fields exceeded economic threshold. Unhatched eggs still in stems, some in blackhead capsule stage, indicate larval populations will continue to increase. District> County= percent alfalfa stems with eggs [host height], average percent egg hatch, larvae per sweep, and adult averages per sweep: C> Fairfield= less than 5% [25 cm], no data, 12, and 0.1, and 15% [33 cm], 10%, 1, and 0.4, and SE> Washington= 35% [43 cm], 11%, 70, and 0.5, and less than 5% [41.9 cm], no data, 60, and 0.03. (G.P. Walker).

WEST VIRGINIA - District> County= alfalfa weevil larval averages per 30 stems of forage legumes [average stem length], percent tips infested, percent tips damaged, and degree-days C accumulation by April 18-25: E> Jefferson= 74 [26.7 cm], no data, 70%, and 121°, and Berkeley= 17.7 [21 cm], no data, 35.5%, and 118°; NW> Hancock= 2 [19.2 cm], 33%, no data, and no data, Brooke= 3 [24.2 cm], 20%, no data, and no data, and Ohio= 3 [22 cm], 24.6%, no data, and no data; and SW> Mason= no data (90% were 1st instar) [18.5 cm], 32%, no data, and no data. (C. Stuart et al.). Current status: NW> Ohio= 28 [31.8 cm], 70%, no data, and 129° (J.D. Hacker); and SW> Mason= large larvae 48.5 [30 cm], 77.5%, no data, and 191° (C. Cook).

VIRGINIA - Alfalfa weevil surveys based on 5 samples of 10 tips each of forage legumes. Tip infestation 73% and average estimated defoliation 25%. Four fields (80%) and 88% of acreage exceeded economic threshold. District> County= hectares sampled, number infested per 50 tips, percent infestation, and percent defoliation: C> Bedford= 1 ha, 33, 66%, and 40%, and 2 ha, 31, 62%, and 35% in 2 fields, and Fluvanna= 3 ha, 23, 46%, and 2%, and N> Culpeper= 14 ha, 47, 94%, and 25%, and 5.7, 48, 96%, and 25% in 2 fields. (D.L. Barnes et al.).

EGYPTIAN ALFALFA WEEVIL (*Hypera brunneipennis*) - ARIZONA - District> County= larvae and adults per 100 sweeps of alfalfa: C> Maricopa= 2-6 and 2-5 and Pinal= 279 and 0. (L.G. Blackledge et al.).

PEA LEAF WEEVIL (*Sitona lineatus*) - IDAHO - Populations spotty in alfalfa. District> County= counts per 10 sweeps of alfalfa: N> Latah and Nez Perce= up to 130 in Kendrick, Potlatch, and Troy areas and in Leland area, respectively. (L.E. O'Keeffe).

VARIEGATED CUTWORM (*Peridroma saucia*) - OKLAHOMA - Light in most alfalfa fields in several northeastern and north-central counties. District> County= larvae per 10 sweeps of alfalfa: C> Logan= heavy, preventing regrowth in 1 field; EC> Muskogee= up to 10; NE> Wagoner= up to 5; and WC> Washita= up to 3. (D.C. Arnold). NEBRASKA - District> County= egg status on forage legumes: S> Adams= egg laying underway. (Stevens, Miller).

BLUE ALFALFA APHID (*Acyrthosiphon kondoi*) - UTAH - Adults in damaging numbers on forage legumes at Hurricane. District> County= status: S> Washington= controls applied to some fields at Hurricane. (R. Chase, J.B. Karren).

OKLAHOMA - District> County= blue alfalfa aphid counts per 10 sweeps of forage legumes: New county records--C> Cleveland= averaged 9 at Noble, April 25, collected and determined by R.C. Berberet; SE> McCurtain= 27 at Harris, April 27, collected by J.R. Bolte, and determined by D.C. Arnold. In other fields--NE> Osage, Craig, Tulsa, Washington, and Wagoner, NC> Kay and Noble, C> McClain, Cleveland, Lincoln, and Pottawatomie, and SC> Murray, Garvin, Marshall, Johnston, and Carter= 5-20, 74-100% of population this species; and WC> Washita and SW> Caddo= up to 5. (D.C. Arnold).

PEA APHID (Acyrthosiphon pisum) - NEVADA - District> County= status: S> Lincoln= mostly this species and BLUE ALFALFA APHID (A. kondoi) 20-30 per sweep of hay alfalfa at Hiko (S. Steffen, D. Zoller) and W> Washoe= averaged 10 per sweep on small experimental plots of alfalfa at university (J. Berg). ARIZONA - District> County= immatures and adults on alfalfa: C> Maricopa= 30-120 per 100 sweeps and SW> Yuma= 500 per 10 sweeps. (L.G. Blackledge et al.).

OKLAHOMA - Area> pea aphid counts on alfalfa: All areas> still absent or very light; eastern one-half> none in 7 of 17 fields in 17 counties, 1-5 per 10 sweeps in other 10 fields. (D.C. Arnold).

WISCONSIN - District> County= pea aphid nymphs newly hatched to two-thirds grown per 50 sweeps of alfalfa: As far north as WC> Buffalo and EC> Winnebago= ranged 0-5 [8-10 cm tall] as early as April 24. Currently little change in population. (O.L. Lovett).

SPOTTED ALFALFA APHID (Therioaphis maculata) - ILLINOIS - Populations expected to decrease rapidly. District> County= adults per 100 sweeps of alfalfa: C> Mason= 130 in 1 field. (K.D. Black).

POTATO LEAFHOPPER (Empoasca fabae) - ILLINOIS - First of season. District> County= adults per 100 sweeps of alfalfa April 30: C> Mason= 1 in 1 field. (K.D. Black).

LYGUS BUGS (Lygus spp.) - ARIZONA - District> County= nymphs and adults on alfalfa: C> Maricopa= 1-20 and 8-100 per 100 sweeps and Pinal= 53-60 and 19-120 per 100 sweeps and SW> Yuma= 3-12 and 8 per 10 sweeps. (L.G. Blackledge et al.).

SOYBEANS

DISEASES

NEMATODES - WISCONSIN - August 1978 survey of 60 soybean fields in top 18 soybean-producing counties reviewed: A SPIRAL NEMATODE (Helicotylenchus sp.) and a LESION NEMATODE (Pratylenchus sp.) most frequent, in 47% and 43% of soil samples, respectively. A PIN NEMATODE (Paratylenchus sp.), a LANCE NEMATODE (Hoplolaimus sp.), a DAGGER NEMATODE (Xiphinema sp.), and a STUNT NEMATODE (Tylenchorhynchus sp.) in 12% or less of soil samples. Pratylenchus sp. most significant endoparasite of soybean roots, in 45% of samples; other plant parasitic nematodes in 12% or less of root samples. Larvae of a CYST NEMATODE (Heterodera sp.) not recovered from soil or root samples. Cysts of this genus recovered from 28% of soil samples, usually 10 or fewer per sample; few samples contained 25-50 cysts. Plant parasitic nematodes recovered from soil and root samples very light, much lighter than needed to produce obvious damage on plants. Only 1 soil sample from SC> Rock= contained more than 100 Helicotylenchus sp. with rest of samples usually containing fewer than 25 plant parasites. Plant parasitic nematodes usually fewer than 25 per 100 g of roots recovered from 50% of root samples. (O.L. Lovett).

COTTON

INSECTS

COTTON FLEAHOPPER (Pseudatomoscelis seriatus) - TEXAS - District> County= counts per 100 cotton plants April 27: Lower Valley> Cameron= 0-35, Hidalgo= 2-100, Willacy= 0-34, and Lower Gulf Coast area> 0-62. (J.A. Jackman).

SUGAR BEETS

INSECTS

SEEDCORN BEETLE (*Stenolophus lecontei*) - NEBRASKA - District> status on sugar-beets: NW> caused stand losses, some fields will require replanting. (Hagen).

MISCELLANEOUS FIELD CROPS

INSECTS

BLACK VINE WEEVIL (*Otiorhynchus sulcatus*) - IDAHO - District> County= larval status: SW> Canyon= severely damaged hop yards. Full-grown larvae present, no pupae April 24. Total loss in 1 yard with 75-100 per hill. Some damage in most yards, larvae 5-15 per hill, with reduced and/or delayed growth. (C.R. Baird).

POTATOES, TOMATOES, PEPPERS

INSECTS

COLORADO POTATO BEETLE (*Leptinotarsa decemlineata*) - OKLAHOMA - District> County= egg masses per 3 potato plants [15 cm]: NE> Tulsa= averaged 1. (D.C. Arnold).

VARIEGATED CUTWORM (*Peridroma saucia*) - OKLAHOMA - District> County= status: NE> Tulsa= destroyed commercial planting of seedling tomatoes in Bixby area and WC> Washita= up to 3 per plant in potato field in Cowden area. (D.C. Arnold).

BEANS AND PEAS

INSECTS

PEA LEAF WEEVIL (*Sitona lineatus*) - IDAHO - District> County= adult status April 28: N> Nez Perce= seriously damaged green peas near Lewiston, and Latah= seriously damaged Austrian winter peas near Troy. (H.W. Homan, R.L. Kambitsch).

CUCURBITS

INSECTS

STRIPED CUCUMBER BEETLE (*Acalymma vittata*) - SOUTH CAROLINA - Adults heavy on cucumbers. District> County= counts per 0.3 row m of cucumbers: S> Barnwell= averaged 1 (2-4 per plant on many plants) on 0.8 ha at Hilda. Damage moderate, controls recommended. (J.T. Walker).

GENERAL VEGETABLES

INSECTS

ASPARAGUS BEETLE (*Crioceris asparagi*) - OREGON - First adults of season. County= adults on miscellaneous field crops. Umatilla= adults observed April 24 at Hermiston. (K. Goeden).

SPOTTED ASPARAGUS BEETLE (*Crioceris duodecimpunctata*) - OREGON - First adults of season. County= adults on miscellaneous field crops. Umatilla= many adults observed April 28. (K. Goeden).

DECIDUOUS FRUITS AND NUTS

INSECTS

ORIENTAL FRUIT MOTH (*Grapholitha molesta*) - NEW YORK - First adults of season. District> County= status on fruit trees: W> Ontario= adults in pheromone trap. (Leeper).

SPRING CANKERWORM (*Paleacrita vernata*) - OKLAHOMA - District> County= status on apples: WC> Washita= completely defoliated orchard and EC> Pittsburg= heavy. (D.C. Arnold).

WINTER MOTH (*Operophtera brumata*) - OREGON - County= status: Multnomah= heavy on flowering cherry in southwestern and southeastern areas of Portland. (R. Furniss). Most larvae in late instar, some produced cocoons. (R. Westcott).

PEACH TWIG BORER (*Anarsia lineatella*) - OREGON - County= status: Umatilla= flagging from larval feeding very evident in unsprayed orchards near Hermiston. (K. Goeden).

PEAR PSYLLA (*Psylla pyricola*) - NEW YORK - First egg hatch of season. District> County= status: W> Wayne= on fruit. (Leeper).

ROSY APPLE APHID (*Dysaphis plantaginea*) - NEW YORK - First hatch of season. District> County= status: W> Wayne= on fruit April 25. (Bruno, Wey).

ORNAMENTALS

INSECTS

WINTER MOTH (*Operophtera brumata*) - OREGON - County= status on rhododendron: Multnomah= fed on tender young leaves of Rhododendron rigidum and hybrid rhododendron in southwestern and southeastern areas of Portland. (R. Furniss). Most larvae in late instar, some produced cocoons. (R. Westcott).

BLACK VINE WEEVIL (*Otiorrhynchus sulcatus*) - NEW YORK - First outdoor activity of season. District> County= status: Long Island> Suffolk= on ornamentals April 24. (Kowalsick).

FOREST AND SHADE TREES

INSECTS

SOUTHERN PINE BEETLE (*Dendroctonus frontalis*) - TENNESSEE - New county records. District> County= collection data on shortleaf pine (no city data): West Tennessee> Chester= March 1977 by R. Blevins, McNairy= June 1977 by J. Jeter, and Hardeman= November 1977 by J. Sims. All determined by B. Kauffman. (M.E. Cooper).

WINTER MOTH (*Operophtera brumata*) - OREGON - County= status: Multnomah= heavy on maple in southwestern and southeastern areas of Portland. (R. Furniss). Most larvae in late instar, some produced cocoons. (R. Westcott).

A PYRALID MOTH (*Macalla thrysialis*) - FLORIDA - District> County= status on Swietenia mahagoni (West Indian mahogany) week of April 23: S> Broward= heavily defoliated extensive plantings along streets and in yards at Ft. Lauderdale and vicinity; infested terminal growth on 75% of 300 field-grown mahogany plants at nursery at Coral Springs. (K.L. Tyson).

MAN AND ANIMALS

INSECTS

HORN FLY (*Haematobia irritans*) - OKLAHOMA - District> County= counts per head on cattle: SE> Latimer, Le Flore, and McCurtain= 50-200; C> Payne and NC> Noble= 75-100. (D.C. Arnold). MISSISSIPPI - Increased. Area> adults on cattle: Northeastern> ranged 50-200+ per head. (R. Anderson).

FACE FLY (*Musca autumnalis*) - ILLINOIS - Area> average per animal on pastured cattle: Southern one-half> 5. (K.D. Black). IOWA - First of season. Females laying eggs on cow manure. District> County= status April 28: C> Story= 2 gravid females collected. (C.M. Ernst).

STORED PRODUCTS

INSECTS

A MEALYBUG (*Phenacoccus solani*) - OKLAHOMA - New State record. District> County= status on potatoes: WC> Washita= heavy on farm stored *Solanum tuberosum* (potato) at Bessie, September 29, 1978. Collected by E.A. Cleveland. Determined by D.R. Miller. (D.C. Arnold).

BENEFICIAL ORGANISMS & THEIR ENEMIES

DISEASES

AN INSECT FUNGUS (*Entomophthora phytonomi*) - KENTUCKY - Probably present in *Hypera postica* (alfalfa weevil) populations throughout much of State. District> County= prevalence in alfalfa weevil larval samples: C> Barren and Midwestern> Caldwell= about 20-50% and Bluegrass> Fayette= less than 5-10%. (P.E. Sloderbeck, G.L. Nordin).

FEDERAL AND STATE PROGRAMS

DISEASES

WHITE PINE BLISTER RUST (*Cronartium ribicola*) - WISCONSIN - Area> status on pine: Southwestern> yellow-orange aecia breaking through bark surface of infected white pine branches. (O.L. Lovett).

INSECTS

CEREAL LEAF BEETLE (*Oulema melanopus*) - INDIANA - District> County= status on wheat: SC> Harrison= eggs averaged about 9 per 25 stems in 1 field about 20 m from a wood, probably still at beginning of egg laying period, some hatched, and 1st instar larva observed. (R.W. Meyer). OHIO - Adults increased to heavy counts and laying eggs on wheat. Eggs ranged 1-9 on most infested stems, many eggs will fail to hatch. District> County= adult averages per sweep of wheat [host height] and percent of stems bearing leaves with at least 1 egg April 30 to May 1: C> Fairfield= 0.23 [28 cm] and no data, and 0.05 [25 cm] and no data; SE> Perry= 1.79 [no data] and 70%, and 0.03 [43 cm] and no data, and Washington= 0.94 [41 cm] and 40%, 0.99 [25 cm] and 80%, 2.20 [43 cm] and 80%, and 0.04 on barley [no data] and no data. (G.P. Walker).

NORTH CAROLINA - Cereal leaf beetle adult status in 37 counties on small grain varieties: infested 64 of 140 sites, 1 larva collected before April 25. (Galloway). WEST VIRGINIA - District> County= adults on oats: NW> Harrison= 25 per 100 sweeps (eggs and larvae none) April 18 (A.E. Tustin) and Brooke= 0.32 per sweep (eggs less than 1 per 0.09 sq m) April 25 (J.D. Hacker). MARYLAND - All areas> egg laying underway, eggs averaged 5.5 (ranged 1.5-22.4) per 0.09 sq m April 23, development 2-3 weeks ahead of 1978 but considered normal; NC> Washington and Baltimore= adults heavier than 1978's level, 2-6 per sweep in most heavily infested fields. (C. Staines, L. Hellman).

GRASSHOPPERS - OREGON - County= 1st instar Melanoplus spp. probably packardii nymphs on turf, pasture, and rangeland: Walla Walla= observed April 26 in Tower Imnaha River Canyon and Umatilla= April 29 in Hermiston area. (K. Goeden). OKLAHOMA - District> County= 1st and 2nd instar, mostly Melanoplus spp. (5-6 species), nymphs per 0.09 sq m of pastures: SC> Carter, Johnston, and Love= up to 20 in certain favorable areas. (D.C. Arnold). NEBRASKA - Hatching likely to begin within 2 weeks. District> status: NW> eggs hatched in field margins surveyed, nymphs in 2nd instar and up to 30 per 0.09 sq m in some areas. Ageneotettix deorum eggs reached segmented stage of development in rangeland surveyed. (Hagen).

GYPSY MOTH (Lymantria dispar) - MICHIGAN - Hatched. District> County= status: C> Montcalm= hundreds of egg masses examined, hatching observed. (Hanna). DELAWARE - Hatched. District> County= status on white oak: N> New Castle= first egg masses hatched May 1. (P.P. Burbutis).

PINK BOLLWORM (Pectinophora gossypiella) - ARIZONA - District> County= adult pheromone trap counts per trap (and number of days): SW> Yuma= 3-5 (3) at Dome and Wellton and 3-6 (5) at Parker and Yuma; and C> Maricopa= 1 (5) in Harquahala Valley. (P. Gomez et al.).

SCREWWORM (Cochliomyia hominivorax) - No cases reported from continental United States April 8-14. No cases confirmed in portion of Barrier Zone in Republic of Mexico. Total of 3 cases reported in Mexico south of Barrier Zone. Number of sterile flies released this period totaled 53,100,200 as follows: Texas 32,341,600; New Mexico 4,040,000; Arizona 16,718,600. Total of 115,601,000 sterile flies released within Barrier of Mexico. (J.E. Novy, M.E. Meadows).

DETECTION

NEW STATE RECORD

INSECTS

A MEALYBUG (Phenacoccus solani) - OKLAHOMA - Washita County. (p. 260).

NEW COUNTY RECORDS

INSECTS

AN ANT (Formica pallidefulva pallidefulva) - OKLAHOMA - District> County= taken in pasture: SE^{1/4} McCurtain= collected from mounds 3 km east of junction of State Highway 87 and U.S. Highway 259 April 23 by C.C. Johnston. Determined by D.C. Arnold. (D.C. Arnold).

BLUE ALFALFA APHID (Acyrthosiphon kondoi) - OKLAHOMA - Cleveland and McCurtain. (p. 256).

SOUTHERN PINE BEETLE (Dendroctonus frontalis) - TENNESSEE - Chester, McNairy, and Hardeman. (p. 259).

LIGHT TRAP COLLECTIONS

State	Date	Temperature °C.	Precipitation mm	Type of trap	Number of traps used	Number of species	Number of individuals	Number of collections	Number of species per collection	Number of individuals per collection	Number of species per trap	Number of individuals per trap	Number of species per state	Number of individuals per state	Number of species per collection	Number of individuals per collection	Number of species per trap	Number of individuals per trap	Number of species per state	Number of individuals per state
ARIZONA	Mesa 4/23-29	BL	52	BL	2	7	20	1	1	0	0	0	0	0	0	0	0	0	0	0
FLORIDA	Gainesville 4/26-5/2	BL	2	BL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
INDIANA	La Grange 4/26-5/2	BL	0	BL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KENTUCKY	Tippencanoe 4/26-5/2	BL	0	BL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KENTUCKY	Lexington 4/24-30	BL	5	BL	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1
KENTUCKY	Princeton 4/25-5/1	BL	1	BL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MISSISSIPPI	Stoneville 4/27-5/3	BL	15	2BL	15	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
NEBRASKA	Concord 5/1	BL	6	BL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OHIO (Counties)	Brown 4/21-27	BL	4	3BL	4	14	1	1	1	1	1	1	1	1	1	1	1	1	1	1
OHIO (Counties)	Wayne 4/26-5/2	BL	0	BL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TENNESSEE	Selmer 4/26-5/4	BL	0	BL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TENNESSEE	Springhill 4/26-5/4	BL	0	BL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TEXAS	College Station 4/26-5/4	BL	7	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WEST VIRGINIA	Putnam 4/28-29	BL	3	BL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WISCONSIN	Hancock 4/25-5/2	BL	0	BL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WISCONSIN	Lancaster 4/25-5/2	BL	0	BL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Pest Interceptions of Quarantine Significance at Ports of Entry

Plant Importation and Technical Support Staff
Plant Protection and Quarantine Programs, USDA

<u>Life Stage</u>	<u>Host</u>	<u>Probable Origin</u>	<u>Port of Entry</u>	<u>Desti-nation</u>
<u><i>Uredo behnickiana</i></u> P. Henn a rust Det. R. Hashimoto	uredial	on leaves of <u>Oncidium</u> plants from cargo	Brazil	Los Angeles
<u><i>Aleurocanthus husaini</i></u> Corbett a whitefly Det. S. Nakahara	pupal	on leaves of Murraya from baggage	India	Kennedy Airport
<u><i>Cryptophlebia leucotreta</i></u> Meyrick false codling moth Det. M. Schubel	larval	in <u>Capsicum</u> from baggage	Nigeria	NV
<u><i>Dacus cucurbitae</i></u> (Coquillet) melon fly Det. R.K. Kunishi	larval	in zucchini from baggage	Hawaii	Kona
<u><i>Parlatoria proteus</i></u> (Curtis) a diaspidid scale Det. S. Nakahara	adult	on leaves of tropical plants from cargo	Thailand	TX
<u><i>Urocerus gigas gigas</i></u> (Linnaeus) a siricid wasp Det. D.R. Smith	adult	in wood crates of machinery	West Germany	Charleston
<u><i>Xyleborus perforans</i></u> (Wollaston) a scoytid beetle Det. D.M. Anderson	adult	in lumber	Peru	Charleston
<u><i>Monacha cantiana</i></u> (Montagu) a helicid snail Det. R. Munkittrick	adult	on container van	Italy	Miami

SUMMARY OF PEST CONDITIONS IN THE UNITED STATES - 1978

(Continued from page 250)

ORNAMENTALS

INSECTS

For WINTER MOTH (Operophtera brumata) on rhododendrons in OREGON, see CPPR 4 (15):244.

BAGWORM (Thyridopteryx ephemeraeformis) larvae in OKLAHOMA were hatching in Pittsburg County by late April. Moderate to heavy infestations were present on evergreens in many areas by the first of July and continued into September where controls were not applied. Adult male emergence was underway by mid-September. Bagworm larvae in KENTUCKY were active from mid-May until early September. Populations were heavy enough in some locations to completely defoliate small trees. Male adults were becoming active during the week of September 22 in Fayette County.

Damage by mostly OBSCURE ROOT WEEVIL (Sciopithes obscurus) adults to rhododendrons and other ornamentals in western WASHINGTON continued to be the most serious landscape problem caused by insects.

Heavy feeding by POTATO LEAFHOPPER (Empoasca fabae) on ornamentals in southern WISCONSIN caused heavy defoliation and leaf deformity. Populations remained for a large portion of the growing season.

SLUGS AND SNAILS

The first nongreenhouse infestations of BROWN GARDEN SNAIL (Helix aspersa) in OREGON were reported on ornamentals from the Willamette Valley. Establishment was confirmed in a nursery retail sales yard in Lane County in May and in residential Albany, Linn County, a month later.

FOREST INSECT AND DISEASE HIGHLIGHTS 1/

Eastern Conditions

Insects

SPRUCE BUDWORM (Choristoneura fumiferana), GYPSY MOTH (Lymantria dispar), and SOUTHERN PINE BEETLE (Dendroctonus frontalis) were the most significant insects in the eastern United States. Spruce budworm defoliated trees on 3,116,090 ha (7.7 million acres), 17% more than in 1977. The acreage defoliated increased by 22% in MAINE to 2,832,809 ha (7 million acres) and by 41% in VERMONT to 25,091 ha (62,000 acres). In MICHIGAN, MINNESOTA, WISCONSIN, and NEW HAMPSHIRE, the amount of defoliation caused by this insect decreased or remained the same as in 1977.

1/ The following summary is the highlights section from the "Forest Insect and Disease Conditions in the United States - 1978" which was compiled and published by the Forest Service, U.S. Department of Agriculture. Copies of the complete annual summary are available upon request from the Regional Forester or Area Director in your area. Addresses of the regional offices may be found on page 268 in this issue of the CPPR.

An overall decrease in defoliation caused by gypsy moth was due mainly to the 65% decrease in defoliation in PENNSYLVANIA and the 52% decrease in MASSACHUSETTS. Acreages affected tripled in NEW JERSEY and increased fivefold in NEW YORK and VERMONT. Gypsy moth is considered to be established in MICHIGAN, NORTH CAROLINA, and VIRGINIA and populations are increasing in WISCONSIN.

The number of southern pine beetle infestations increased in GEORGIA (100 spots) and was significant in MISSISSIPPI (2,300 spots). Infestations in TEXAS, ARKANSAS, LOUISIANA, OKLAHOMA, and ALABAMA decreased sufficiently to allow control by State agencies.

Other significant insects include FALL CANKERWORM (Alsophila pometaria) and cneworms in the South, and TENT CATERPILLARS (Malacosoma spp.) and OAK LEAF-TIER (Croesia semipurpurana) complex in the North. Fall cankerworm defoliated 44,710.9 ha (109,000 acres), primarily in NORTH CAROLINA and GEORGIA. The cneworms, significant in seed orchards, reduced cone crops from 35% to 60% in some areas. FOREST TENT CATERPILLAR (Malacosoma disstria) defoliated 200,000+ ha (600,000+ acres) in INDIANA, MINNESOTA, WISCONSIN, NEW HAMPSHIRE, MASSACHUSETTS, NEW YORK, and VERMONT. A population collapse is expected in Indiana. The oak leaptier complex defoliated about 80,000 ha (200,000 acres) in Massachusetts, WEST VIRGINIA, and NEW JERSEY.

Diseases

SCLEROVERRIS CANKER (Gremmeniella abietina), FUSIFORM RUST (Cronartium fusiforme), nursery diseases, PITCH CANKER (Fusarium lateritium f.sp. pini) and CONIFER ROOT AND HEART ROT (Fomes annosus) were the major disease problems in the East. There was a resurgence of the Lake States strain of scleroderris canker in northern WISCONSIN and the Upper Peninsula of MICHIGAN. More areas infested by the European strain, the more virulent strain which can kill mature trees, have been found in NEW YORK and VERMONT. This strain was confirmed for the first time in Ontario and is also suspected to be present in NEW HAMPSHIRE.

Nursery diseases killed millions of seedlings in nurseries in the North and South and in newly planted areas in the North. Stunting of about 4 million seedlings in Federal nurseries in MINNESOTA and MICHIGAN and State nurseries in WISCONSIN will reduce the probability of these seedlings surviving when outplanted. Better fumigation techniques and recent successes with the introduction of mycorrhizal fungi into nursery beds have produced cautious optimism about the possibility of reducing losses to pathogens in seedbeds and increasing seedling survival after outplanting.

Fusiform rust is now present in 10 southern States where about 100 million board feet of timber is lost annually to the disease. Infection of nursery stock has been controlled with a fungicide.

The number of plantations affected by pitch canker in FLORIDA increased, but the severity of the disease decreased throughout the South.

Although the incidence of conifer root and heart rot is relatively heavy in some areas in SOUTH CAROLINA and GEORGIA, where there are high hazard sites and no stump treatment has been done, disease incidence has decreased in areas of low hazard sites or where stump treatment has been done.

Climatic conditions in 1978 were conducive to infection by needlecast diseases. These diseases caused extensive damage in some local areas in the North and were widespread with moderate rates of infection throughout the East.

WESTERN CONDITIONS

INSECTS

WESTERN SPRUCE BUDWORM (Choristoneura occidentalis) and MOUNTAIN PINE BEETLE (Dendroctonus ponderosae) were the most damaging insect pests in forests of the western United States. Other harmful insects causing important damage included WESTERN PINE BEETLE (Dendroctonus brevicomis), DOUGLAS-FIR BEETLE (Dendroctonus pseudotsugae), SPRUCE BEETLE (Dendroctonus rufipennis), and DOUGLAS-FIR TUSSOCK MOTH (Orgyia pseudotsugata).

Western spruce budworm defoliated Douglas-fir and true fir on just under 2.1 million ha (5.2 million acres). The area defoliated increased over that of 1977 in southern IDAHO, southwestern MONTANA, WYOMING, COLORADO, and parts of northern ARIZONA and NEW MEXICO. Populations and the defoliated area decreased in OREGON, WASHINGTON, northern Idaho, northwestern Montana and parts of Arizona and New Mexico.

Mountain pine beetle destroyed lodgepole, ponderosa, and timber pine on about 2 million ha (4 million acres). COLORADO, MONTANA, IDAHO, WYOMING, OREGON, and WASHINGTON reported major infestations. Scattered tree destruction occurred in ARIZONA and NEW MEXICO. Mountain pine beetle also destroyed substantial numbers of vigorous young sugar pines in northern CALIFORNIA.

Western pine beetle outbreaks continued in ponderosa pine stands in the central and southern Sierra Nevada of CALIFORNIA and in eastern OREGON and WASHINGTON. Scattered tree destruction also occurred in southwestern IDAHO, ARIZONA, and NEW MEXICO.

Douglas-fir beetle was active in southern IDAHO. Populations decreased in OREGON and WASHINGTON, but 18,798 ha (46,450 acres) were affected nonetheless. Scattered tree destruction occurred in northern Idaho and MONTANA.

Spruce beetle was the most damaging insect in ALASKA, destroying trees on more than 50,910 ha (125,800 acres). Tree destruction also occurred in northeastern WASHINGTON and to a lesser degree in northern IDAHO, MONTANA, WYOMING, COLORADO, ARIZONA, and NEW MEXICO.

Douglas-fir tussock moth larvae defoliated Douglas-fir and true firs on about 4,000 ha (10,000 acres) in south-central OREGON and 3,000 ha (7,000 acres) in NEW MEXICO. Populations were generally light in other parts of the west except in local areas in CALIFORNIA and COLORADO.

DISEASES

DWARFMISTLETOES (Arceuthobium spp.) and root pathogens remained the most important disease-causing agents in the West. Foliage diseases were particularly prevalent.

Dwarf mistletoes continued to damage most conifer species throughout the West. Infections caused growth loss and tree mortality. Precise impact data is still lacking, but observations indicate that losses are tremendous. Surveys to develop impact data are underway and figures should be available soon.

Root diseases caused significant tree mortality in many areas. LAMINATED ROOT ROT (Poria weiri) affected about 5% of the Douglas-fir area in OREGON and WASHINGTON. SHOESTRING ROOT ROT (Armillaria mellea) caused damage throughout

the West. Large infection centers were found in eastern Oregon, northern IDAHO, MONTANA, and COLORADO. CONIFER ROOT AND HEART ROT (*Fomes annosus*) was found associated with bark beetles in CALIFORNIA and with other pathogens in northern Idaho and was reported for the first time in Colorado on white fir, and was found infecting up to 30% of the stems in Oregon and Washington western hemlock stands. BLACK STAIN ROOT DISEASE (*Verticiladiella wagenerii*) continued to be found in Oregon, Washington, California, Idaho, and Colorado.

The incidence of foliage diseases was heavy in many parts of the West, probably due to moist conditions in the spring of 1978. These diseases probably caused some growth loss but little or no mortality.

REGIONAL AND AREA OFFICE ADDRESSES

U.S. FOREST SERVICE

U.S. Forest Service
Federal Building
Missoula, MT 59807

U.S. Forest Service
Folwell Avenue
St. Paul, MN 55108

U.S. Forest Service
P.O. Box 25127
Lakewood, CO 80225

U.S. Forest Service
P.O. Box 365
Delaware, OH 43015

U.S. Forest Service
Federal Building
517 Gold Avenue, SW
Albuquerque, NM 87102

U.S. Forest Service
P.O. Box 5895
Asheville, NC 28803

U.S. Forest Service
Federal Building
324-25th Street
Ogden, UT 84401

U.S. Forest Service
2500 Shreveport Highway
Pineville, LA 71360

U.S. Forest Service
630 Sansome Street
San Francisco, CA 94111

U.S. Forest Service
1720 Peachtree Road, NW
Suite 800
Atlanta, GA 30309

U.S. Forest Service
P.O. Box 3623
Portland, OR 97208

U.S. Forest Service
Federal Office Building
P.O. Box 1628
Juneau, AK 99802

U.S. Forest Service
370 Reed Road
Broomall, PA 19082

U.S. Forest Service
80 Daniels Street
Portsmouth, NH 03801

FOREST AND SHADE TREES

HIGHLIGHTS

FALL WEBWORM damage was heavy in parts of Virginia and Maryland; populations decreased sharply in New Hampshire. Mostly SPRING CANKERWORM caused heavy damage in Oklahoma and North Dakota. PIT SCALES still are serious oak pests in Oregon.

DISEASES

DUTCH ELM DISEASE (Ceratocystis ulmi) was reported in KANSAS from the north-east, east-central, southeast, central, and south-central districts and was most obvious in the southeast and east-central districts.

INSECTS

PALES WEEVIL (Hylobius pales) caused extensive damage in some loblolly pine plantations in MARYLAND. The following percent seedling mortality (and reproduction type) by county was reported in August: Worcester--10% (natural), Wicomico--37% (plantation), and Somerset--37% in area 1 and 12% in area 2 (plantation).

The use of pheromone traps to detect and monitor EUROPEAN PINE SHOOT MOTH (Rhyacionia buoliana) populations in OREGON was expanded in the northern area. No adults were found in Morrow, Gilliam, Sherman, Wasco, and Hood River Counties. Other eastside traps indicated that European pine shoot moth is well established at Hermiston, McNary, and Umatilla, and sparsely, but widely distributed at Pendleton, all in Umatilla County. Westside trapping included many new locations, most of which were pine growers wishing to export cut Christmas trees. Fifty-five farms were surveyed. Three Clackamas County operations were found infested, 2 near Estacada and 1 at Mulino. Adults were also taken at 4 nurseries in Multnomah County, as well as in single nurseries in Columbia and Lane Counties. Eradication treatments were continued for a third year to 2,500 trees at Woodburn, Marion County. Controls to suppress population levels were applied to 3,345 pines at selected localities in Umatilla County.

PINE BUTTERFLY (Neophasia menapia) in Spokane, WASHINGTON, was heavy, principally on ponderosa pine. Heavy defoliation occurred in some areas. No control was effective.

BALSAM WOOLLY ADELGID (Adelges piceae) continued to damage true firs in western WASHINGTON due to lack of effective control measures.

A FALSE SPIDER MITE (Pentamerismus erythreus), SPRUCE SPIDER MITE (Oligonychus ununguis), and a SPIDER MITE (Oligonychus milleri) continued to cause extensive damage to Christmas trees and other ornamental conifers in OREGON. Heavy populations of P. erythreus and O. ununguis developed due to a warm, dry summer; many homeowners either treated their trees or suffered losses. O. milleri caused heavy damage to young plantings in pine tree nurseries (trees up to 2 m (6 ft) tall).

BRONZE BIRCH BORER (Agrilus anxius) damage to forest and shade trees was much more serious throughout IDAHO than in previous years, possibly as a result of drought conditions in previous years.

ELM LEAF BEETLE (*Pyrrhalta luteola*) was active in OKLAHOMA on elms by early April. Up to 50% defoliation was reported in Muskogee County by the end of May. Moderate to heavy infestations were common in many areas during July and August. Adults in OHIO, active by mid-May, began laying eggs on Chinese elm in Franklin County by May 31. Pupation of first generation larvae, which skeletonized large shade trees, occurred in mid-July. By August 1, second generation adults began laying eggs and larvae caused additional damage through early September, when the overwintering adults began appearing.

Overall, FALL WEBWORM (*Hyphantria cunea*) larvae in NEW MEXICO were much lighter than in the previous 5 years during summer and fall. Severe defoliation was observed in Chaves and De Baca Counties.

Fall webworm eggs were observed in ARKANSAS on leaves of persimmon trees in Washington County in late June. Larvae were observed on redbud and hickory foliage in the northwestern area by mid to late July. By September 1, trees up to 6 m (20 ft) tall had been completely defoliated in this area. Damage in VIRGINIA was very heavy on Chincoteague Island, Accomack County, in mid to late July. Migrating first generation larvae severely defoliated deciduous trees in the area. On September 22, larvae were again very heavy in this county on silver birch, willow oaks, mimosa, and a great many other trees. This is the second generation which has damaged trees in this area in 1978. Populations in MARYLAND were much heavier than normal. This pest seriously defoliated shade trees in Talbot and Dorchester Counties and controls were applied in many areas statewide.

Fall webworm adults began emerging in NEW HAMPSHIRE from overwintered pupae on June 19. Adults began laying eggs July 7-10. An estimated 7 to 10-fold reduction in populations in 1978 was predicted from preliminary light trap counts. This correlated well with observed reduced viability and size of larvae observed in 1977. Webs became conspicuous by early August. Counts in August of webs on roadside trees confirmed a 7 to 10-fold reduction in webs per 2 road km (1 road mile) throughout the State in 1978, especially in previously heavily infested areas such as Durham, Lee, and Rochester in Strafford County. General surveys averaged only 10-20 webs per 2 road km. Larvae grew very slowly during the warm, dry weather of September and did not complete development until late September. Populations are expected to remain light in 1979.

SPRING CANKERWORM (*Paleacrita vernata*) in KENTUCKY was responsible for heavy defoliation of oak and maple trees in an area about 50 km (30 miles) long and 0.8 km (0.5 mile) wide along a ridge near Lynch in Harlan County. Possibly FALL CANKERWORM (*Alsophila pometaria*) also contributed to the damage.

Spring cankerworm was very heavy from early April to early May in many areas in the eastern two-thirds of OKLAHOMA. Elms, hackberries, and oaks were very commonly damaged. Two or three other caterpillar species contributed to the damage on oaks. In NORTH DAKOTA, male and female adults of spring cankerworm were active on April 10. Egg laying was evident by April 14 in the east-central district. By May 12, early instar larvae were feeding on shade trees in the east-central and northeast districts. Up to 350 1st and 3rd instar larvae of this species and *A. pometaria* per 0.6-m (2-ft) of limb infested elm in the east-central district and caused heavy skeletonizing by May 19. By May 26, a cooperative spray program was initiated in the south-central district. A total of 24 shelterbelts was treated.

PALMERWORM (Dichomeris ligulella) damaged oaks throughout OHIO in mid-June. This was the second year that reports have been numerous. Palmerworm in MARYLAND caused mostly light defoliation in mixed oak forests in Harford, Cecil, and Baltimore Counties. Late instars infested shade trees and ornamental shrubbery (such as azaleas) and required controls. A serious outbreak of this hardwood pest occurred in southeastern PENNSYLVANIA. Defoliation ranged 25-95% in June. The first reports of this pest were received in early June. Swarms of adults were sighted in early August. This was the first outbreak of this pest in this area in nearly 20 years.

VARIABLE OAKLEAF CATERPILLAR (Heterocampa manteo) larvae were unusually heavy on oak trees across central ARKANSAS during July. Defoliation of oaks in many areas was severe. A new generation of larvae was feeding heavily on oak regrowth foliage during late August through September.

POPLAR TENTMAKER (Ichthyura inclusa) larvae caused heavy defoliation in MISSISSIPPI, 35-100% to cottonwood plantations (607.0 ha (1,500 acres)) along the Mississippi River from Washington County to Warren County. Larvae first appeared during late July and decreased by mid-August.

EASTERN TENT CATERPILLAR (Malacosoma americanum) tents in Hocking County and throughout southeastern OHIO were heavier than in the past 3 years. The long, cold winter had favored survival of eggs since temperatures remained consistently below freezing from December through March. Severe weather also decreased the survival of parasites and some predators.

Eastern tent caterpillar eggs began hatching on April 17 in southeastern NEW HAMPSHIRE, 2 days later than in 1977. Hatching was completed by April 26. Tents became visible along roadsides by May 10. Populations were heavier in 1978 than in 1977, averaging 5-10 tents per favored host tree throughout the southeastern area. By late May, infestations were observed throughout the southern two-thirds of the State to Coos County and north to Columbia (Coos County) along the Connecticut River. Egg mass counts in September were much lighter in 1978 than in 1977, possibly due to alternating wet and dry periods during the summer egg laying period. Egg mass counts averaging fewer than 1 mass per favored host tree in 1978, compared to 3-10 masses per tree in 1977, indicated a greatly reduced tent caterpillar population for 1979.

Larvae of a NYMPHALID MOTH (Asterocampa celtis) first appeared during mid-July along the Mississippi River from Bolivar to Claiborne County, MISSISSIPPI. Heavy populations heavily defoliated Celtis laevigata (sugarberry). Populations decreased by early August.

For WINTER MOTH (Operophtera brumata) on maples and mountain ash in OREGON, see CPPR 4(15):244.

A GALL MIDGE (Dasineura gleditchiae) in WASHINGTON caused significant damage to ornamental locust trees, controls were not adequate.

PIT SCALES (Asterolecanium minus and Asterolecanium quercicola) continued to be the most serious pests of native oaks in OREGON. Twig dieback and tree mortality continued to escalate in and around the Willamette Valley on all size and age classes of Quercus garryana (Oregon oak). Damage to white oak also occurred in the Rogue River Valley, but is generally less apparent there because Oregon oak and the more tolerant Quercus kelloggii (California black oak) occur in mixed stands. The only Oregon oak stand which was unaffected is located in western Klamath County, east of the Cascade Mountains. In Douglas

and Curry Counties, the primary host is Quercus chrysolepis (canyon oak). The within-tree scale distribution is much more extensive on this host with scaffold branches as well as small twigs providing habitat for scale development. Severity of infestation and rapidity of branch mortality are thus increased. Extensive areas of live oaks with completely brown foliage were observed in the Cascade Mountains of southwestern Douglas County in late June. Similar damage, although much less widespread, was reported from the Siskiyou Mountains, east of Brookings, Curry County. Applications of early summer insecticides for crawler control remain practical only on residential and park properties. Control on large units such as farm woodlots, is not being attempted because of limited access and prohibitive costs.

WALKINGSTICK (Diapheromera femorata) adults in PENNSYLVANIA were heavy and caused 60-100% damage to hardwoods in the south-central counties in early October. Heavy numbers had not been reported from this area in the past several years.



METRIC CONVERSION

1 cm = 0.393701 in
1 m = 3.28084 ft = 1.09361 yd
1 km = 0.621371 mi
1 sq cm = 0.155000 sq in
1 sq m = 10.7639 sq ft = 1.19599 sq yd
1 ha = 2.47104 acres
1 sq km = 0.386101 sq mi
1 kg = 2.20462 lb
1 t (metric ton) = 1.10231 short ton
1 kg/ha = 0.892183 lb/acre
1 t/ha = 0.446091 ton/acre

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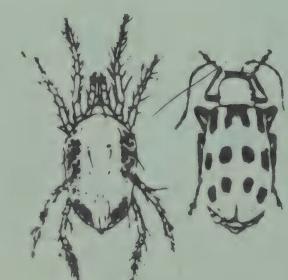
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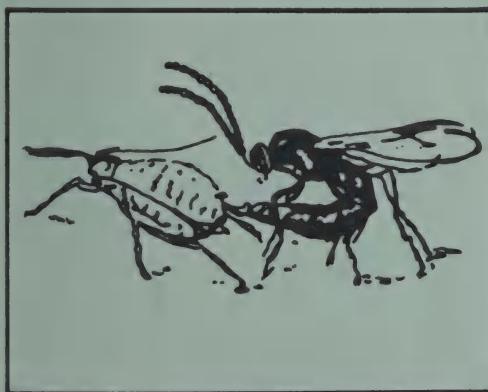
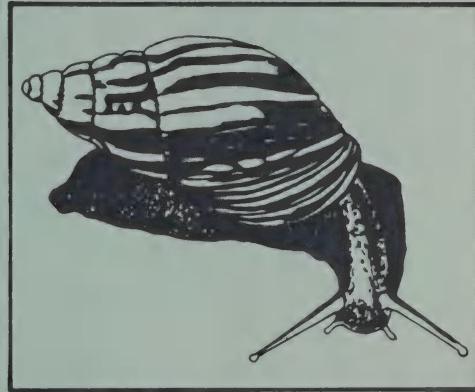
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Cooperative PLANT PEST REPORT

U.S.
DEPARTMENT
OF AGRICULTURE

May 18, 1979
Vol. 4
No. 17

Animal
and Plant
Health
Inspection
Service



This publication is distributed weekly to Federal and State agencies, universities, farmers, and others interested in containing or controlling pests in the United States.

Data included in this publication are compiled from reports submitted by cooperating State, Federal and other agricultural and industrial specialists. Accuracy of the reports is not verified prior to publication.

Cooperative Plant Pest Report supersedes *Cooperative Economic Insect Report*, which was discontinued with Volume 25, Numbers 49-52, 1975.

Correspondence should be directed to:

CPPR

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COOPERATIVE PLANT PEST REPORT

HIGHLIGHTS

Current Conditions

FALL ARMYWORM larvae and distribution on corn in Mississippi more advanced than in past. (p. 275).

SPRING BLACK STEM prevalent and moderate on alfalfa in parts of Kansas. (p. 279).

Prediction

CORN ROOTWORM hatch in Wisconsin likely to be heavier than normal. (p. 276).

CROWN RUST inoculum to be heavy in southern Wisconsin if weather favors development. (p. 276).

Possible HESSIAN FLY infestation on spring grains in northeastern South Dakota. (p. 278).

Detection

New State records include a DERMESTID BEETLE in Illinois (p. 287) and PALMER-WORM in Delaware (p. 290).

For new county records see page 290.

New hosts for ALFALFA LOOPER for California (p. 285) and for a SYRPHID FLY for Hawaii (p. 289).

Some First Occurrences of the Season

STALK BORER larvae, CORN LEAF APHID, ARMYWORM larvae on wheat and alfalfa, and CHINCH BUG eggs in Kansas. MEADOW SPITTLEBUG nymphs in Wisconsin. COLORADO POTATO BEETLE eggs in Kansas. BEAN LEAF BEETLE and SQUASH BUG in Oklahoma. SALTMARSH CATERPILLAR adults in New York. ASTER LEAFHOPPER migrants in Wisconsin. ORIENTAL FRUIT MOTH adults in Colorado. EUROPEAN RED MITE hatch in New York. GYPSY MOTH larvae in Vermont.

Special Reports

Summary of Pest Conditions in the United States - 1978

Man and Animals (p. 293-294).

Households and Structures (p. 294).

Reports in this issue are for the week ending May 11 unless otherwise indicated.

CONTENTS

Corn, Sorghum, Sugarcane Insects.....	275	Cole Crops Insects.....	285
Small Grains Diseases.....	276	Cucurbits Insects.....	285
Insects.....	278	General Vegetables Insects.....	285
Forage Legumes Diseases.....	279	Deciduous Fruits and Nuts Diseases.....	286
Insects.....	280	Insects.....	286
Soybeans Diseases.....	284	Ornamentals Insects.....	286
Tobacco Diseases.....	284	Forest and Shade Trees Insects.....	286
Insects.....	284	Man and Animals Insects.....	287
Miscellaneous Field Crops Insects.....	285	Households and Structures Insects.....	287
Potatoes, Tomatoes, Peppers Insects.....	285		
Beans and Peas Insects.....	285		
Beneficial Organisms and Their Enemies Insects.....	287		
Federal and State Programs Insects.....	288		
Hawaii Pest Report.....	289		
Detection.....	290		
Corrections.....	290		
Light Trap Collections.....	291		
Pest Interceptions of Quarantine Significance at Ports of Entry.....	292		
Summary of Pest Conditions in the United States - 1978 Man and Animals Insects.....	293		
Households and Structures Insects.....	294		

CORN, SORGHUM, SUGARCANE

INSECTS

EUROPEAN CORN BORER (*Ostrinia nubilalis*) - WISCONSIN - Rapid change in weather facilitated corn planting in several localities. Outlook for first generation about same as in 1978. Cooler temperatures slowed pest development in central and northern counties; much of corn now planted will be more susceptible. Pupation likely in advanced sites. (O.L. Lovett). OHIO - District> County= larval status May 8: NC> Seneca= 2 in 20 dead cornstalks, both to pupate soon. (G.P. Walker). NORTH CAROLINA - Adults still active. District> adult averages per night per trap: Southern Coastal> 8. (T.N. Hunt).

ARMYWORM (*Pseudaletia unipuncta*) - NORTH CAROLINA - District> County= damage to corn: Southern Piedmont> Montgomery; Central Coastal> Lenoir; and Northern Coastal> Edgecombe= damage sporadic, little economic damage to date. (T.N. Hunt, Reese). NEW YORK - Area> adult status: Long Island> heavy in blacklight trap catches April 28 to May 4 (M. Semel); Upstate> light in trap catches. (H. R. Willson).

CORN EARWORM (*Heliothis zea*) - MISSISSIPPI - Damage not economic. District> County= status in field corn: EC> Winston, SE & Coastal> Newton and Jones, SC> Covington and Smith, and C> Attala= light, larvae fed in whorls. (R. Anderson). FLORIDA - District> County= percent infested whorls on corn: C> Alachua= 3-5% of generally untreated sweet corn in commercial fields at Alachua (E.R. Mitchell) and NW> Gadsden= 2% of field corn in 16-ha planting at Havana (W.B. Tappan). NORTH CAROLINA - Adults still increased in coastal counties. Egg laying mostly on wild hosts and corn. Damaging larvae expected in corn whorls in Southern Coastal counties in 2-3 weeks. (T.N. Hunt).

FALL ARMYWORM (*Spodoptera frugiperda*) - MISSISSIPPI - Larvae on field corn in every field sampled. Larvae very early this season for ages and for area distribution. In 1978, 2nd and 3rd instar larvae first reported in Newton County June 8. (R.E. Anderson, D.B. Hogg).

District> County	Larvae per 30.5 row m	Instar	Host height (cm)
EC> Winston	1.0	3rd to 4th	15-30
SE & Coastal> Newton	2.0	3rd to 4th	45-60
SE & Coastal> Jones	1.3	4th to 6th	91-121
SE & Coastal> Jones	2.0	1st to 3rd	15-30
SE & Coastal> Pearl River	4.0	4th to 6th	45-60
SC> Covington	1.3	1st to 3rd	15-30
SC> Smith	1.0	5th to 6th	60-76
C> Attala	0.7	3rd to 5th	45-60

FLORIDA - District> County= fall armyworm status on corn: NW> Gadsden= infested whorls on about 3% of field corn plants in 2-ha intensively managed planting at Quincy. (W.B. Tappan).

BLACK CUTWORM (*Agrotis ipsilon*) - KANSAS - District> County= status on corn [host stage]: SE> Crawford= Larvae (1-3 cm long) cut off about 3% of plants [3-leaf] in 1 field, Neosho, Montgomery, Labette, Crawford, Allen, Cherokee, and EC> Anderson and Franklin= damage usually none, sometimes trace, in 17 other fields, Wabaunsee= and NE> Riley and Pottawatomie= none in fields

[emerging to 2-leaf] surveyed. (K.O. Bell, Jr.). IOWA - District> County= blacklight trap catches of black cutworm per night May 1-7: NC> Hancock at Kanawha and SC> Ringgold at Beaconsfield= adults fewer than 1 per night, respectively. (L.H. Townsend).

STALK BORER (Papaipema nebris) - KANSAS - First of season. District> County= larval status on sweet corn [seedling]: EC> Douglas= larvae, 3.18 mm long, trace in garden. (S.C. White).

CORN ROOTWORMS (Diabrotica spp.) - WISCONSIN - Heavier than normal hatch on corn likely, 85% or heavier compared with multi-year average of 75%. (O.L. Lovett).

SOUTHERN CORN BILLBUG (Sphenophorus callosus) - NORTH CAROLINA - Still damaged corn in Coastal Plain. District> County= status on corn: Central Coastal> Hyde, Beaufort, Wayne; Northern Coastal> Tyrrell and Washington; and Southern Coastal> Onslow= infestations reported. Southern and extreme Coastal Plain area> stand losses 50% in 1 to 2-ha spots of 8+ ha fields, scattered damage in 30% of fields. Damage most prevalent in nonrotated fields with no soil treatment. (T.N. Hunt).

SUGARCANE BEETLE (Eutheola rugiceps) - SOUTH CAROLINA - District> County= status on corn: S> Colleton= adults heavy in several fields on about 40 ha; damage extensive. (W.P. Yates, D.R. Johnson).

GREENBUG (Schizaphis graminum) - OKLAHOMA - District> County= status on corn: SW> Tillman= small colonies on lower leaf of occasional field corn plants [20 cm tall]. (D.C. Arnold). KANSAS - District> status on sorghum [host stage]: SE> Neosho and Labette= none [emerging to 3 cm tall] in 3 fields. (S.C. White).

CORN LEAF APHID (Rhopalosiphum maidis) - KANSAS - First of season. District> County= status: SE> Neosho= mostly winged in 1 of 19 corn fields [emerging to 4 leaf] and in 1 of 3 sorghum fields [emerging to 3 cm] (S.C. White); NE> Riley= winged adults trace in 1 of 3 corn fields [1 leaf] and Pottawatomie= none in 3 fields [1-2 leaf]; and EC> Wabaunsee= none in 3 corn fields [1-2 leaf] (K.O. Bell, Jr.). MISSISSIPPI - District> County= counts on field corn [15-30 cm tall]: EC> Winston and SE & Coastal> Jones= light, 0-50 per plant. (R. Anderson).

CHINCH BUG (Blissus leucopterus leucopterus) - OKLAHOMA - District> County= counts on young grain sorghum: SC> Bryan= moderate. (D.C. Arnold). KANSAS - No damage in fields checked. District> County= status on corn and sorghum [host stage]: EC> Wabaunsee= adults (nearly all below ground) averaged about 3 (ranged 0-8) per plant [2 leaf] on corn, and trace [younger emerging corn] nearby; NE> Riley and Pottawatomie= none [emerging] in 3 corn fields (K.O. Bell, Jr.). SE> none to trace [emerging to 4 leaf] in 19 corn fields and trace to 2 per 0.3 row m [emerging to 3 cm tall] in 3 sorghum fields (S.C. White). MISSOURI - Area> status on corn [seedling]: WC> adults on 30% of plants in 1 field. (R.E. Munson).

SMALL GRAINS

DISEASES

CROWN RUST (Puccinia coronata) - WISCONSIN - Orange cluster cup stage appeared on buckthorn in southern area. District> County= status on buckthorn: SC> Dane= heavy infection in southern area indicates abundant inoculum to infect oats if weather favors development. (O.L. Lovett).

TAN SPOT (Pyrenophora trichostoma) - KANSAS - Common in most wheat fields, appeared most severe in thin stands. (T. Sim, IV).

District> County	Prevalence (%)	Severity	Host stage
SE> Neosho	100	moderate	heading
SE> Montgomery	none seen		heading
SE> Elk	20	light	boot
SE> Crawford	none seen		heading
SE> Cherokee	none seen		flowering
EC> Anderson	none seen		heading
NE> Brown	80	moderate	jointing
C> McPherson	100	moderate	boot
C> Dickinson	100	moderate	boot
SC> Comanche	100	severe	boot
SC> Barber	100	light	heading
SW> Hamilton	trace	-	early boot
SW> Gray	trace	-	early boot
SW> Ford	trace	-	early boot

SPECKLED LEAF BLOTHC (Septoria tritici) - KANSAS - Common in most wheat fields. (T. Sim, IV).

District> County	Prevalence (%)	Severity	Host stage
SE> Neosho	40-50	light	heading
SE> Montgomery	40	light	heading
SE> Elk	none seen		boot
SE> Crawford	30-80	light	heading
SE> Cherokee	30-50	light	flowering
EC> Anderson	10	light	heading
NE> Brown	none seen		jointing
C> McPherson	10	moderate	boot
C> Dickinson	none seen		boot
SC> Comanche	none seen		boot
SC> Barber	none seen		heading
SW> Hamilton	trace to 20	light	early boot
SW> Gray	20-80	light	early boot
SW> Ford	100	light	early boot

DRYLAND ROOT AND FOOT ROT (Helminthosporium sp. and Fusarium sp.) - KANSAS - Area> status on wheat: NC> still evident in parts of area where extreme cold stressed wheat this past winter. (T. Sim, IV).

WHEAT POWDERY MILDEW (Erysiphe graminis f.sp. tritici) - KANSAS - Became more prevalent in thick wheat in eastern one-half area. (T. Sim, IV).

District> County	Prevalence (%)	District> County	Prevalence (%)
SE> Allen	trace to 80	SE> Crawford	trace
SE> Montgomery	100	EC> Anderson	trace
SE> Elk	90	C> McPherson	trace
SE> Labette	80-100	SC> Barber	100
SE> Neosho	trace to 60		

CEPHALOSPORIUM STRIPE (Cephalosporium gramineum) - KANSAS - District> County= prevalence on wheat: C> McPherson= trace to 80% in several fields. (T. Sim, IV).

INSECTS

ARMYWORM (Pseudaletia unipuncta) - OKLAHOMA - District> County= status per 0.09 sq m of small grains: SW and SC> many larvae still small and damage to small grain heads not yet reported; SW> larvae light in most fields, Cotton= larvae 2-24 in several rank fields of wheat in Randlett area, Tillman= 0-6, 2-10, and 6-12 in 3 rank fields (few fields treated in both counties), Comanche= up to 4, and Jackson= up to 3; SC> Stephens= 4-10 in 1 field of rank barley, this county Love, and Jefferson= few fields treated; C> Grady, Canadian, and Kingfisher= 1st to 3rd instar larvae up to 3-5 in lodged spots in few fields and up to 10 in 1 site in latter county; NC> Noble, Kay, Garfield, and NC> Alfalfa= very small larvae 0-10 with heavy numbers mostly in lodged spots. (D.C. Arnold).

KANSAS - First armyworm larvae of season. District> County= larval status on wheat [host stage]: NE> Riley= larvae up to 0.953 cm long, trace [jointing] in 2 fields, and SE> Neosho, Labette, and Cherokee= up to 1 cm long, trace [headed] in some fields. (K.O. Bell, Jr., S.C. White). OHIO - District> County= adults in blacklight trap: NE> Wayne= counts up sharply over last period. (R. Schmidt, D. Woods).

HESSIAN FLY (Mayetiola destructor) - NEBRASKA - District> County= adults on wheat: SE> Gage= trace in 1 field. (Miller). SOUTH DAKOTA - Area> status: NE> possible infestation on spring grain expected due to cool, wet spring and over-wintered larval population. Weather to date ideal for pest development. Adults preferred spring wheat over winter wheat for egg laying in 1978. Adults may emerge later than in 1978 (late April to mid-May) due to cool spring. (H.K. Kantack).

AN APHID (Rhopalosiphum padi) - TEXAS - District> County= maximum per 0.3 row m of small grains May 2: Northern Low Plains> Wichita and Wilbarger= 1 each. (J.A. Jackman). KANSAS - First of season. District> County= counts on wheat [boot]: SE> Allen= trace in 1 field. (S.C. White).

GREENBUG (Schizaphis graminum) - TEXAS - District> County= maximum per 0.3 row m on small grains May 2: Cross Timbers> Archer= 5; Southern Low Plains> Baylor= 5 and Fisher= 0; Northern Low Plains> Foard= 5, Wilbarger= 5, and Wichita= 14. (J.A. Jackman).

KANSAS - District> County= greenbug status on wheat [host stage] in fields (f): NE> Riley= immatures trace [no stage given] in 1f (K.O. Bell, Jr.); SC> Comanche= averaged 1 and 29 per 100 sweeps [boot] in 2f and Harper= 0-8 per 0.3 row m [boot to headed] in 3f (G.A. Salsbury); and SE> Allen, Neosho, Montgomery, Elk, Labette, Crawford, Cherokee, and EC> Anderson= none [joint to boot to mostly headed] in 15f (S.C. White). NEBRASKA - District> County= averages per 0.3 row m of wheat: SE> Johnson= averaged 4.7 and 0.8, trace, in 2 of 6 wheat fields. (Miller).

CHINCH BUG (Blissus leucopterus leucopterus) - KANSAS - First eggs of season. District> County= egg and adults per 0.3 row m on wheat [host stage]: NE> Riley= eggs few and adults averaged about 5 (ranged 0-25) [jointing] in 1 field (K.O. Bell, Jr.), flight heavy at 1 location near Manhattan, SE> Neosho= eggs none on some wheat [headed] and adults up to about 11 (spotty in fields) and Labette= eggs none on some wheat [headed] and adults up to about 4 (spotty in fields) (T.M. Mize, G.E. Wilde).

NEBRASKA - Chinch bug infested all wheat fields surveyed; no damage. District> County= counts per 0.3 row m of wheat [averaged 34.8 cm extended leaf height]: SE> Johnson, Pawnee, and Gage= 0.7-5.8 (averaged 2.9), mating in first 2 counties. (Miller).

TARNISHED PLANT BUG (*Lygus lineolaris*) - OHIO - Status on small grains May 6-8. (G.P. Walker).

District> County	Adults per sweep	Host	Host stage
C> Union	0.01	Rye	last ligule
EC> Coshocton	0.02	Wheat	1-2 node
EC> Coshocton	less than 0.01	Wheat	2 node
EC> Coshocton	0.10	Wheat	1-2 node
NE> Stark	0.01	Wheat	1 node
NE> Stark	0.01	Wheat	2 node
NC> Huron	less than 0.01	Wheat	1 node
NC> Seneca	less than 0.01	Wheat	1 node
NC> Crawford	0.02	Wheat	-

WINTER GRAIN MITE (*Penthaleus major*) - TEXAS - District> County= maximum per 0.3 row m of small grains May 2: Northern Low Plains> Wichita= 1 and Foard= 10. (J.A. Jackman).

FORAGE LEGUMES

DISEASES

SPRING BLACK STEM (*Phoma medicaginis*) - KANSAS - Still affected first alfalfa growth; defoliation continued. (T. Sim, IV).

District> County	Prevalence (%)	Severity	Host height (cm)
SE> Elk	60-100	light	64
SE> Labette	50-70	light	56
SE> Montgomery	70	light	71
SE> Crawford	90	light	58
NE> Brown	100	moderate	48
NE> Atchison	100	moderate	48
C> McPherson	100	moderate	71
C> Dickinson	100	moderate	46
SC> Sumner	100	moderate	56-61
SW> Kearny	100	light	28
SW> Finney	100	light	33-38
SW> Gray	100	light	33

WEST VIRGINIA - District> County= spring black stem prevalence/severity in alfalfa fields (f): NW> Ohio= 30%/light in 2f, May 3 and E> Jefferson= currently 60%/moderate in 1f. (R.L. Williams).

LEPTO LEAF SPOT (*Leptosphaerulina briosiana*) - KANSAS - Still affected first growth of alfalfa; defoliation continued. (T. Sim, IV).

District> County	Prevalence (%)	Severity	Host height (cm)
SE> Elk	70-100	light	64
SE> Labette	50-100	light	56
SE> Montgomery	70	light	71
SE> Crawford	100	light	58
NE> Brown	100	light	48
NE> Atchison	none seen	-	48
C> McPherson	none seen	-	71
C> Dickinson	none seen	-	46
SC> Sumner	90	light	56-61
SW> Kearny	90	light	28
SW> Finney	90	light	33-38
SW> Gray	90	light	33

STEMPHYLIUM LEAF BLIGHT (*Stemphylium botryosum*) - WEST VIRGINIA - District> County= prevalence/severity on alfalfa plants: E> Jefferson= 15%/light in 1 field, no defoliation. (R.L. Williams).

INSECTS

ALFALFA WEEVIL (*Hypera postica*) - NEVADA - District> County= larvae per sweep of hay alfalfa: W> Churchill= 20-50 (averaged 30) east of Fallon. (F. Hilbig). NEW MEXICO - Alfalfa cut in most areas. District> County= status on alfalfa: SE> Chaves and Eddy= eggs on occasional plant, larval decrease in Pecos Valley due partly to parasitism by *Bathyplectes curculionis* (an ichneumonid wasp); Eddy= alfalfa weevil larvae 2-12 per 25 sweeps in Artesia and Cottonwood areas; and Chaves and Eddy= adults still heavy in many fields and caused extensive foliar damage; Lea= larvae averaged 2 per 25 sweeps in 3 fields in Hobbs area. (L. Gholson, T. Riddle).

OKLAHOMA - District> County= alfalfa weevil status on alfalfa: C> Grady= infested average of 63% of tips and Kingfisher= larvae 2-30 per 0.09 sq m; SC> Johnston= larvae 8-10 per 0.09 sq m and Stephens= newly emerged adults averaged 4 per 10 sweeps and overwintered adults ranged 2-3; EC> Muskogee and NE> Wagoner= larvae 0-89 per 10 sweeps and overwintered adults 0-2 per 10 sweeps; NC> Noble, Garfield, and Alfalfa= larvae 2-30 per 0.09 sq m; SW> Kiowa= newly emerged adults averaged 10 per 10 sweeps, Tillman= newly emerged adults averaged 20 per 10 sweeps, and Cotton, Jackson, Caddo, Greer, and WC> Washita= newly emerged adults lighter. (D.C. Arnold).

KANSAS - District> County= alfalfa weevil status week ending May 4: SC> Pratt= 1 field treated and Stafford= second field considered for treatment (S.M. Welch, F.L. Poston), eggs present, larvae still light in 1 field near St. John. (S.M. Welch), NE> Atchison= larvae increased to 1.7 per stem [38 cm long] in 1 field (B.D. Hilbert); and SW> Finney= larvae increased to 2 per stem [23 cm long] in 1 field, top 3-5 cm showed noticeable lacing; no serious tip damage. Populations increased, early instars still predominant in all areas. Currently, some infestations serious. Foliar damage heavy in alfalfa [33 cm] field just west of Garden City. (M.L. Shuman). Potential for heavy damage appears probable if not treated in some fields north of Garden City where adults averaged 50-80 per 100 sweeps and larvae 18-30 per sweep by May 4, 12-15 days from harvest; damage to regrowth possible (D.E. Mock), C> Ellsworth= larvae 100 per sweep, serious, in part of field near Carneiro and 40 per sweep, no serious tip damage, in nearby field. (R.J. Baurenfiend). Following counts in Berlese funnel May 7-10. (K.O. Bell, Jr. et al.).

District> County	Major 2 larval instars	Larval averages per stem	Tips infested	Average stem length (cm)
NE> Riley	2nd, 3rd	0.35	-	51
NE> Riley	1st, 3rd	0.17	-	58
NE> Atchison	2nd, 3rd	1.0	-	48
SC> Sumner	1st, 2nd	0.47	46	61
SE> Montgomery	3rd, 4th	2.4	88	71
SE> Crawford	1st, 2nd	0.36	72	58
SW> Finney	2nd, 3rd	2.1	100	33
SW> Kearny	1st, 3rd	0.42	10	28

Alfalfa weevil counts by sweeping in 1 field each (unless stated otherwise) May 1-10. (K.O. Bell, Jr. et al.).

District> County	Larvae per sweep	Adults per 100 sweep	Tip damage (%)	Host height (cm)
NE> Riley	3.1	2	-	51
NE> Riley	1.5	1	-	58
NE> Riley	1.2	2	9	56
NE> Pottawatomie	0.2	0	trace	56
NE> Pottawatomie	0.7	4	10	61
EC> Wabaunsee	0.2	0	trace	61
EC> Wabaunsee	0.5	1	-	56
SE> Montgomery	-	trace	88	71
SE> Elk	22	20	-	64
SE> Elk	13	0	-	71
NE> Brown	56	11	-	43
NE> Jefferson	18	2	-	38
NE> Shawnee	0.9	2	5	-
C> Marion	5	-	-	-
SC> Sumner	33	40	46	61
SW> Finney	47	14	100	33
SW> Finney (3 fields)	18-30	50-80	70-80	-
SW> Kearny	0.2	0	10	28

OHIO - District> County= alfalfa weevil status: EC> Coshocton= larvae heavy May 6; C> larvae lighter than in other areas, but eggs and adults may cause problems. (G.P. Walker).

County	Stems in- fested with eggs (%)	Average size egg batch	Larvae per sweep	Adults per sweep	Host height (cm)
C> Union	73	10	1.15	3.00	36
EC> Coshocton	75	-	19.0	0.50	43
EC> Coshocton	20	13	122.0	0.77	30
NE> Stark	15	10	2.3	0.75	30
NE> Stark	25	9	2.15	1.05	28
NC> Ashland	5	10	less than 0.01	0.17	28
NC> Huron	10	9	0.07	0.60	36
NC> Seneca	10	7	1.07	0.46	30
NC> Crawford	less than 5	-	0.50	0.43	30

MISSOURI - Area> alfalfa weevil status on forage legumes: SW> larvae 4-20 per plant. Infestations economic in 30% of fields checked. Feeding damage on 50-85% of terminals in heavily infested fields. (R.E. Munson). NEBRASKA - District> County= status on alfalfa: SE> Johnson, Pawnee, and Gage= 0 in 4 of 5 fields, Pawnee= adults 2 and larvae 0 per 100 sweeps in fifth field (Miller), and Otoe= larvae trace in 14 fields (Stevens). IOWA - District> County= egg hatch on forage legumes: SW> Page and SE> Davis= sufficient degree-days accumulated to allow initial hatch May 7-8. (L.H. Townsend).

WISCONSIN - Hot temperatures in southern counties accelerated alfalfa weevil activity. Mating and egg laying intense in some fields. District> County= status: SW> Grant, Iowa, and Sauk, SC> Green, and WC> La Crosse= adults heavy and eggs present, adults 0 per 25 sweeps to 2.5 per sweep of alfalfa [15-25 cm], heavier in fields in Green, Grant, Sauk, and SC> Dane counties that had heavy populations in 1978. Field averages heavier than in 1978 and adults in almost all fields in surveyed area Egg clusters ranged 0.25-2 per 10 stems and most eggs recently laid. Finds of mating adults and differences of egg development suggest prolonged hatching period. Few fields with 2nd instar larvae. Larvae about 1 per 1,000 tips, very light, apparently hatched from eggs laid in fall of 1978; this hatch unimportant in past. District> County= weevil degree-day accumulation (base 8.9°C) March 1 to May 9: SC> Dane= 107.8° at Madison, SE> Washington= 90.0° at Hartford, EC> Outagamie= 62.22° at Appleton, WC> Dunn= 69.44° at Menomonie, and C> Waushara= 88.9° at Hancock. (O.L. Lovett).

WEST VIRGINIA - District> County= average number of alfalfa weevil larvae per 30 alfalfa stems [host height], percent tips damaged, and number of degree-days C: E> Jefferson= 47 [46.0 cm], 81%, and 2600, and Berkeley= 44.5 [41.9 cm], 70%, and 2000; and SW> Mason= 21 (many pupating) [50.3 cm], 33%, and 2370. (C. Stuart).

VIRGINIA - Tip infestation by alfalfa weevil 63%, average estimated defoliation 5%, 4 fields (67%) and 36% of acreage exceeded economic threshold (50% or greater infestation), and larval length about 3.18 mm. Most fields in Piedmont section treated or cut, and pests should be less of a problem. (W.A. Allen, L.M. Los). Following data based on 5 samples of 10 tips each May 2-8. (J. Hutcheson et al.).

District> County	Infestation (%)	Defoliation (%)	Ha
C> Amelia	78	1	2
C> Amelia	68	1	3
C> Fluvanna	82	3	4.9
SE> Isle of Wight	24	15	12
S> Patrick	30	1	8.1
W> Roanoke	94	10	2

CLOVER LEAF WEEVIL (*Hypera punctata*) - KANSAS - Unusually heavy on alfalfa, no disease (common during most years) affected pest. District> County= 1 of heaviest counts per 100 sweeps of alfalfa: EC> Shawnee= averaged 72 in field near Silver Lake. (J.D. Lambley).

VARIEGATED CUTWORM (*Peridroma saucia*) - OKLAHOMA - District> County= larvae per 0.09 sq m of alfalfa: NC> Alfalfa, Noble, and Garfield, and C> Kingfisher= 12-15, Grady= 2-32 (averaged 12) with heavy damage to regrowth; EC> Muskogee

and NE> Wagoner= 0-10 in cut fields (0-12 per 10 sweeps in uncut fields); SC> Stephens= 2-23 (averaged 11) in 1 field and averaged 10 under windrows in second field. (D.C. Arnold).

KANSAS - Area> variegated cutworm status on alfalfa: E> increased, still too small to be readily found, eggs still found. District> County= counts per 0.09 sq m in number of fields (f): SE> Montgomery= 13 in 1f, Elk= trace to 2 in 2f, Labette= 1-2 in 2f, and Crawford= 2-3 in 3f. (S.C. White). Per 100 sweeps: EC> Shawnee= 26 in 1f and Wabaunsee= 0 in 2f; NE> Brown= 20 in 1f, Riley= 2-30 in 3f, and Pottawatomie= 10-20 in 2f; and SC> Sumner= 33 in 1f. (B.D. Hilbert et al.).

MISSOURI - Area> variegated cutworm larvae on alfalfa: SW> small larvae 3-10, light to moderate, in 10 fields. (R.E. Munson). NEBRASKA - District> County= 2nd instar larvae per 100 sweeps of alfalfa: SE> Johnson, Pawnee, and Gage= averaged 4 in 2 of 5 fields. (Miller).

ARMYWORM (*Pseudaletia unipuncta*) - KANSAS - First larvae of season. District> County= status in alfalfa: NE> Riley= larvae, up to 9.53 mm long, trace on alfalfa. (K.O. Bell, Jr.).

GREEN CLOVERWORM (*Plathypena scabra*) - SOUTH CAROLINA - District> County= status on vetch: S> Barnwell= Larvae averaged 6 per 25 sweeps at Edisto experiment station; about 50% of larvae parasitized by *Apanteles marginiventris* (a braconid wasp), several larvae parasitized by *Meteorus autographae* (a braconid wasp), 1 pupa parasitized by a tachinid fly, and about 5% of larvae dead from *Nomuraea rileyi* (an insect fungus) infection. (G.S. McCutcheon).

SPOTTED CUTWORM (*Amathes c-nigrum*) - WISCONSIN - District> County= status on alfalfa: C> Portage and Waushara= larvae up to 50 per 0.09 sq m, clipped plants in several fields. (O.L. Lovett).

PEA APHID (*Acyrthosiphon pisum*) - NEVADA - District> County= averages per sweep on alfalfa: W> Churchill= 10 east of Fallon (F. Hilbig) and Humboldt= none on seed alfalfa at Jungo (A. Stitt); S> Clark= 5-10 on hay alfalfa in Moapa Valley with predators heavy (W. Hoff). NEW MEXICO - District> County= adults and nymphs on alfalfa: SE> Lea, Eddy, and Chaves= decreased. (L. Gholson). OKLAHOMA - District> County= averages per 0.09 sq m of alfalfa: NC> Alfalfa, Garfield, and Noble and C> Kingfisher= 4. (D.C. Arnold). District> County= status on crimson clover: SE & Coastal> Newton= heavy, 700+ per 25 sweeps. (R. Anderson).

BLUE ALFALFA APHID (*Acyrthosiphon kondoi*) - OKLAHOMA - New county records. District> County= collection data from alfalfa: SC> Love= collected at Courtney, May 7, 1979; SW> Cotton= at Cookietown, and Tillman= at Tipton, May 8. Collected and determined by R.C. Berberet. Southwestern counties= still light but up to 70 per 10 sweeps in C> Grady County. (D.C. Arnold).

SPOTTED ALFALFA APHID (*Theroaphis maculata*) - NEBRASKA - Trace on alfalfa. District> County= counts per 100 sweeps of alfalfa: SE> Johnson= 14 and Pawnee= 6. (Miller).

POTATO LEAFHOPPER (*Empoasca fabae*) - NEBRASKA - Trace on alfalfa. District> County= averages per 100 sweeps of alfalfa: SE> Johnson= 2 and Pawnee= 4. (Miller).

MEADOW SPITTLEBUG (Philaenus spumarius) - WISCONSIN - First nymphs of season. District> County= status on alfalfa: SC> Green= first found and SW> Grant= District> County= status on alfalfa: SC> Green= first found and SW> Grant= heaviest in this county but much fewer than 1 per 10 stems. (O.L. Lovett).

TARNISHED PLANT BUG (Lygus lineolaris) - MISSISSIPPI - District> County= adults and nymphs per 25 sweeps of crimson clover: SE & Coastal> Newton= 30-55. (R. Anderson).

LYGUS BUGS (Lygus spp.) - NEVADA - District> County= status on seed alfalfa: W> Humboldt= gravid females at Jungo; no nymphs. (L. Stitt). UTAH - Adults W> Humboldt= gravid females at Jungo; no nymphs. (L. Stitt). UTAH - Adults W> Humboldt= gravid females at Jungo; no nymphs. (L. Stitt). UTAH - Adults W> Humboldt= gravid females at Jungo; no nymphs. (L. Stitt). ARIZONA - District> Cache= averaged 5 near Logan. (D.W. Davis, L. Jech). ARIZONA - District> County= nymphs and adults per 100 sweeps of alfalfa: C> Maricopa= 20-50 and 30-150, and Pinal= 38-504 and 17-80, and SE> Cochise= 60 and 150. (T. McCall et al.).

SOYBEANS

DISEASES

NEMATODES - IOWA - District> County= averages per 100 cc of soil per soybean field from samples collected September 1 to October 15, 1978: SE> Davis= a SPIRAL NEMATODE (Helicotylenchus sp.) 25-150, Louisa= a spiral nematode 25-75, a RING NEMATODE (Criconemoides sp.) 10-25, and a LESION NEMATODE (Pratylenchus sp.) 10-25, Lee= a spiral nematode 10-50, a STYLET NEMATODE (Quinisulcios sp.) and a STUNT NEMATODE (Tylenchorhynchus sp.) 100-150, a lesion nematode 25-150, and a LANCE NEMATODE (Hoplolaimus sp.) 150-500, and Van Buren= a spiral nematode 75-150, a lesion nematode 25-150, a lance nematode 75-150, and a DAGGER NEMATODE (Xiphinema sp.) 10-50; EC> Muscatine= a spiral nematode 75-150, a ring nematode 25-50, a lance nematode 10-50, a stylet nematode 75-125, and a lesion nematode 10-50, and Jones= a lesion nematode 10-25; NC> Floyd= a spiral nematode 10-50, and Winnebago= a spiral nematode 5-25 and a CYST NEMATODE (Heterodera sp.) 3-10; and NE> Buchanan= a lance nematode 10-25. (D.J. Williams).

TOBACCO

DISEASES

POTATO VIRUS Y - See GREEN PEACH APHID (Myzus persicae) below.

INSECTS

TOBACCO BUDWORM (Heliothis virescens) - FLORIDA - District> County= status on tobacco: C> Alachua= young larvae averaged 32 per 100 plants in 1 field by May 4, averaged 10 by May 7 after treatment (E.P. Mitchell); NE> Suwannee= larvae infested 26% of plants in untreated field at Live Oak, a decrease from 47% of 2 weeks ago. Current status on tobacco: NE> Suwannee= one 2nd instar larva, population mostly laying eggs at Live Oak. (W.B. Tappan).

GREEN PEACH APHID (Myzus persicae) - FLORIDA - District> County= status on tobacco: NE> Suwannee= counts light, 2-3 per plant, normal for time of year; 5 plants infected with POTATO VIRUS Y at Live Oak. (W.B. Tappan).

MISCELLANEOUS FIELD CROPS

INSECTS

CARROT BEETLE (*Bothynus gibbosus*) - SOUTH CAROLINA - District> County= status on sunflowers: S> Barnwell= adults, up to 6, on some sunflowers [15 cm], severed lateral roots and stems in about 5% of stand near Blackville. Field treated at planting. (J.W. Chapin).

POTATOES, TOMATOES, PEPPERS

INSECTS

COLORADO POTATO BEETLE (*Leptinotarsa decemlineata*) - KANSAS - First eggs of season. District> County= status on potato: EC> Shawnee= in garden at Rossville, April 28. (J.D. Lambley).

VARIEGATED CUTWORM (*Peridroma saucia*) - OKLAHOMA - District> County= average per 0.3 row m of potatoes: NE> Tulsa= averaged 1 in commercial plants at Bixby. (D.C. Arnold).

BEANS AND PEAS

INSECTS

BEAN LEAF BEETLE (*Cerotoma trifurcata*) - OKLAHOMA - First of season. District> County= status on snap beans: NE> Tulsa= light. (D.C. Arnold).

COLE CROPS

INSECTS

ALFALFA LOOPER (*Autographa californica*) - CALIFORNIA - New host record for State. District> County= Tarvae on Sisymbrium irio (a mustard): San Joaquin Valley> Kings= feeding larvae collected April 10 by J. Dunnicliff. (C.S. Papp).

CUCURBITS

INSECTS

SQUASH BUG (*Anasa tristis*) - OKLAHOMA - First of season. District> County= status on squash: NE> Wagoner= noted in garden. (D.C. Arnold).

GENERAL VEGETABLES

INSECTS

CABBAGE LOOPER (*Trichoplusia ni*) - FLORIDA - District> County= young larvae averaged per celery plant: S> Palm Beach= about 5 in Bell Glade area. (W.G. Genung).

SALTMARSH CATERPILLAR (*Estigmene acrea*) - NEW YORK - First of season. District> adults in blacklight trap May 4: Long Island> adults active. (M. Semel).

ASTER LEAFHOPPER (*Macrosteles fascifrons*) - WISCONSIN - First migrants of season, about 1 week earlier than in 1978. District> County= adults: SC> Green= 1 per 500 sweeps at Brodhead; SW> Grant= 8 per 100 sweeps at Muscoda, Vernon at Viroqua and Sauk at Spring Green= 2 per 100 sweeps; and WC> Trempealeau= 3 per 100 sweeps at Galesville. (O.L. Lovett).

DECIDUOUS FRUITS AND NUTS

DISEASES

APPLE SCAB (*Venturia inaequalis*) - VERMONT - County= percent spore immaturity, percent spore maturity, and infection period on fruit May 3-10: Windham at Putney= 24%, 42%, and moderate, Addison at Shoreham= 12%, 47%, and moderate, Grand Isle at South Hero= 16%, 47%, and moderate, and Bennington at Bennington= 15%, 9%, and no data. (R.E. Desrosiers).

INSECTS

ORIENTAL FRUIT MOTH (*Grapholitha molesta*) - COLORADO - First adults of season. District> County= adults on peach: Western Slope> Mesa= appeared April 24 in orchards. (D.J. Nees).

TARNISHED PLANT BUG (*Lygus lineolaris*) - NEW YORK - Area> status on fruit trees May 4: Hudson Valley and W> adults and feeding damage to opening fruit buds observed throughout fruit regions. (Leeper).

EUROPEAN RED MITE (*Panonychus ulmi*) - NEW YORK - First of season. Area> status of overwintered eggs: Hudson Valley> first hatched May 1 (Smith) and W> May 4 (Lienk). MAINE - Overwintered eggs began hatch May 7, 4 days ahead of 10-year average and 5 days earlier than 1978. (A. Gall).

PECAN NUT CASEBEARER (*Acrobasis nuxvorella*) - OKLAHOMA - District> County= status on pecans: EC> Muskogee= overwintered larvae heavily damaged shoots in some areas. (D.C. Arnold).

ORNAMENTALS

INSECTS

A GEOMETRID MOTH (*Pero mizon*) - CALIFORNIA - New host record. District> County= larval counts on azalea: Sacramento Valley> Sacramento= 2 fed on small ornamental bush at residence at Sacramento April 7, reared to adults by May 7. (C.S. Papp).

A DIASPIDID SCALE (*Abgrallaspis cyanophylli*) - FLORIDA - New county record. District> County= collection data: NW> Bay= adults on leaves of *Ilex opaca* (American holly) plants at park in rural area. Collected by D. Reese and E. Graham, April 5, 1979. Determined by A.B. Hamon. Plants growing in wild. (D. Reese).

FOREST AND SHADE TREES

INSECTS

EUROPEAN PINE SAWFLY (*Neodiprion sertifer*) - IOWA - District> County= egg status on ornamental pine May 7: C> Story= hatch observed, common defoliator throughout much of State in 1978. (J.A. Mertins, D.R. Lewis).

A CECIDOMYIID MIDGE (*Dasineura gleditchiae*) - KANSAS - First of season. District> County= galls on honeylocust: NE> Riley= at Manhattan, April 29 (P.L. Nixon) and EC> Geary= light to heavy on young locust at 1 site at Junction City, May 3 (K.O. Bell, Jr.).

MAN AND ANIMALS

INSECTS

HORN FLY (*Haematobia irritans*) - OKLAHOMA - District> County= counts per head on beef cows: NC> Major= averaged 400, C> Payne= ranged 100-125, EC> Haskell and Pittsburg, SC> Johnston and Pontotoc, and SC> Atoka= ranged 50-200. (D.C. Arnold). MISSOURI - Area> status on cattle: NC> light populations, averaged 10 adults per side. (R.D. Hall). MISSISSIPPI - District> County= counts per head of cattle: EC> Oktibbeha and Lowndes= 100+. (R. Anderson). FLORIDA - District> County= averages per head: C> Alachua= 434 in small beef herd at Monteocha 19 km north of Gainesville. (J.F. Butler).

FACE FLY (*Musca autumnalis*) - OKLAHOMA - District> County= average per head on cattle: NE> Craig= less than 1. (D.C. Arnold). MISSOURI - Area> counts on cattle: NC> light, averaged less than 1 per head. (R.D. Hall). OHIO - District> County= status on cattle May 6: C> Union= tormenting cattle, about 20 flies per face. (G.P. Walker).

A BIBIONID FLY (*Plecia nearctica*) - FLORIDA - District> County= counts: C> Alachua and Marion= light to very light; Sumter, Hernando, Pasco, Hillsborough, and S> Manatee= heavy; Sarasota, Charlotte, and Lee= heaviest. (L.A. Hetrick).

MOSQUITOES - OHIO - District> County= status week of May 9: NE> Lake= *Aedes canadensis* and *A. stimulans* adults emerged; NC> Richland= biting reported. (R. Berry).

LONE STAR TICK (*Amblyomma americanum*) - OKLAHOMA - District> County= averages per head on cattle: EC> Haskell= 10 in 1 herd. (D.C. Arnold). KANSAS - New county record. District> County= collection from human: EC> Shawnee= at Topeka, April 23, 1979. Collected by P.S. Hoobler. Determined by J.D. Lambley and H.D. Garwood. (K.O. Bell, Jr.).

HOUSEHOLDS AND STRUCTURES

INSECTS

A DERMESTID BEETLE (*Dermestes peruvianus*) - ILLINOIS - New State record. District> County= collection data from household: NE> Cook= collected at Winnetka, April 14, 1978, by J.R. Wolff. Determined by J.K. Bouseman, confirmed by J.M. Kingsolver. (K. Black).

BENEFICIAL ORGANISMS & THEIR ENEMIES

INSECTS

AN ICHNEUMONID WASP (*Bathyplectes curculionis*) - OKLAHOMA - District> County= adults per 10 sweeps of alfalfa: SC> Stephens= second generation averaged 25 by May 4. (D.C. Arnold).

A BRACONID WASP (Microctonus aethiopoides) - TENNESSEE - District> County= female parasitism of Hypera postica (alfalfa weevil) larvae: East Tennessee> Greene= 30-40% in 1 field. (L. Klostermeyer).

HONEY BEE (Apis mellifera) - OHIO - Colony loss of 5-8% during winter as usual. During April, 417 apiaries and 3,319 colonies inspected, 12 apiaries quarantined for Bacillus larvae (American foulbrood). Prevalence of Streptococcus pluto and Achromobacter eurydice (European foulbrood) and Ascospaera apis (chalkbrood) lighter than normal and prevalence of American foulbrood heavier than normal. The following is apiary inspection data for April. (G. Rudloff).

Disease diagnosed	Colonies inspected	Infected colonies	Infection (%)
American foulbrood	3,319	20	0.6
European foulbrood	3,319	7	0.21
Chalkbrood	3,319	2	0.06

FEDERAL AND STATE PROGRAMS

INSECTS

CEREAL LEAF BEETLE (Oulema melanopus) - OHIO - District> County= status on small grains: NE> Portage and Stark= damage almost none on oats [1 shoot]; EC> Coshocton= adults actively laying eggs; NC> activity decreased May 6-8. (G.P. Walker).

District> County	% of stems bearing leaves with at least 1 egg	Adults per sweep	Host	Host stage
C> Union	80	0.01	rye	last ligule
EC> Coshocton	43	2.00	wheat	1- node
EC> Coshocton	40	5.69	wheat	2 node
EC> Coshocton	3	0.19	wheat	1-2 node
NE> Stark	3	0.07	wheat	1 node
NE> Stark	3	0.07	wheat	2 node
NC> Huron	3	0.01	wheat	1 node
NC> Seneca	3	0.01	wheat	1 node
NC> Crawford	3	0.01	wheat	-

GRASSHOPPERS - WASHINGTON - District> County= status May 1: C> Klickitat= 1st instar nymphs 8 km east of Maryhill on roadside grass and lower elevation pastures and range, all nymphs confined to vicinity of egg beds where they are hatching; nymphs 40% Melanoplus sanguinipes and 60% Oedaleonotus enigma enigma. None at higher elevations above Columbia Gorge. (D.W. Keim).

NEW MEXICO - District> County= grasshopper status on rangeland: NE> Colfax and Union= Psoloessa sp. and Xanthippus corallipes averages of 3-4 per 0.8 sq m, caused concern among rangers, Union= Metator pardalinus hatch began south of Clayton (adult survey in 1978 indicated potentially heavy populations); SE> Chaves= Mermiria maculipennis maculipennis and Schistocerca sp., mostly 1st and 2nd instar nymphs, began hatch in range areas near Elkins, April 23-27. (M. Perry).

TEXAS - District> County= undetermined species of nymphs per 0.8 sq m May 4: SC> Wilson and Gonzales= 0-5 on open range and 20-100 in hatching areas. (J.A. Jackman). OKLAHOMA - District> County= grasshopper nymphal status: NC> Alfalfa= 12-15 per 0.09 sq m in pastures in some areas and Major= mostly Melanoplus spp. hatched on roadsides. (D.C. Arnold). NEBRASKA - District> County= status: SW> Lincoln= 2nd instar Melanoplus bivittatus trace (Campbell); NW> recent cool temperatures and snow cover expected to destroy many hatched grasshoppers and delay additional egg hatch by at least 1 week (Hagen, Bell).

GYPSY MOTH (Lymantria dispar) - WISCONSIN - No hatch as of May 9. District> County= cooperative spray program: SE> Waukesha= 129 ha will be sprayed with Lymantria dispar NUCLEAR POLYHEDROSIS VIRUS near Oconomowoc May 23 depending upon development of insect and weather. (O.L. Lovett). NEW YORK - District> County= status on ornamentals: Long Island> Nassau= larvae 0.64 cm long observed May 1. (Binko, Moramarco).

VERMONT - First gypsy moth egg hatch of season. County= status: Chittenden= noted at Winooski, April 29 and 30. Overwintered egg survival 0-70%. (G.B. MacCollom). MAINE - County= status of egg masses: Penobscot= very heavy hatch percentage continued in Veazie and Old Town areas. (A. Gall).

RANGE CATERPILLAR (Hemileuca oliviae) - COLORADO - Total of 643,096.2 ha surveyed. District> County= total hectares with evidence of infestation, hectares with 1 egg mass per transect, and hectares with 2 or more egg masses per transect: SE> Las Animas and Baca= 92,203.9 ha, 33,153 ha, and 25,900 ha. (L.C. Martinez).

SCREWWORM (Cochliomyia hominivorax) - Total of 2 cases reported from continental United States April 15-21 as follows: Texas 1 and California 1. Total of 474 cases confirmed in portion of Barrier Zone in Republic of Mexico. Total of 250 cases reported in Mexico south of Barrier Zone. Number of sterile flies released this period totaled 45,003,700 as follows: Texas 25,386,900, New Mexico 3,920,000, Arizona 15,696,800. (J.E. Novy, M.E. Meadows).

HAWAII PEST REPORT

Ornamentals - New find of a WHITEFLY (Aleurodicus dispersus) for Makalapa area on Oahu Island. Heavy on various plants in one-half block area. New host record for a SYRPHID FLY (Allotropa obliqua) in State. Recently reared from A. dispersus on infested seagrape Leaves at Mapunapuna district in Honolulu, April 25. Larvae of this fly fed on whitefly immatures. Effectiveness as biological control agent may be adversely affected by an ENCYRTID WASP (Ooencyrtus guamensis), which parasitizes pupae of this syrphid fly. Specimens of this wasp also taken from same sample. (D.S. Henderson et al.).

Snail Pest - GIANT AFRICAN SNAIL (Achatina fulica) light during April in most infested areas of Kauai Island. (D.T. Sugawa).

DETECTION

NEW STATE RECORDS

INSECTS

A DERMESTID BEETLE (Dermestes peruvianus) - ILLINOIS - Cook County. (p. 287).

PALMERWORM (Dichomeris ligulella) - DELAWARE - County= collection data from oak: New Castle= adult and larvae collected in Greenville area, June 12, 1978. Collected and determined by F.E. Boys. Other adults collected on same host at Newark, May 22, 1966, and May 12, 1971. (P.P. Burbutis).

NEW COUNTY RECORDS

INSECTS

BLUE ALFALFA APHID (Acyrthosiphon kondoi) - OKLAHOMA - Love, Cotton, and Tillman. (p. 283).

A DIASPIDID SCALE (Abgrallaspis cyanophylli) - FLORIDA - Bay. (p. 286).

LONE STAR TICK (Amblyomma americanum) - KANSAS - Shawnee. (p. 287).

A LYGAEID BUG (Lamprodema maurum) - CALIFORNIA - District> County= collection from corn left in field: Sacramento Valley> Yolo= collected at Davis, February 2, 1979, by W. Crepps. Determined by P.D. Ashlock. (C.S. Papp).

CORRECTIONS

CPPR 4(16):255 - ALFALFA WEEVIL (Hypera postica) - WISCONSIN - "First damage . . . will . . . 149-204 . . . at Hancock." should read "First damage . . . may . . . 167-222 . . . Dane= 58.89° . . . Washington= 49.4° . . . Outagamie= 36.1° . . . Dunn= 53.3° . . . Grant= 55° . . . and Waushara= 54° at Hancock."

Fifth paragraph - ILLINOIS - ". . . accumulation (base 8.9°C) . . . at Urbana." should read ". . . accumulation (base 8.9°C) . . . Winnebago= 76.7° . . . Adams= 176° . . . Mason= 133° . . . and Champaign= 135° at Urbana."

CPPR 4(16):256 - Second paragraph - WEST VIRGINIA - "Jefferson . . . 121° . . . Mason . . . 191°" should read "Jefferson . . . 138° . . . Berkeley . . . 136° . . . Ohio . . . 147° . . . Mason . . . 208°"

LIGHT TRAP COLLECTIONS

State	Date	Location	Type of trap	Precipitation (inches)	Temperature (°F)	M.V. = Measurable weather	DL = Blacklight	Species					
								C. amoenus	C. borealis	C. cinctus	C. fuscipes	C. luteola	C. m. m.
ARIZONA	Mesa 4/30-5/6		BL	16									
CALIFORNIA	Bellota 4/24	10-23	BL										
	Manteca 4/25	16-26	BL										
FLORIDA	Gainesville 5/3-7		BL										
KANSAS	Haviland 5/4-9		BL	51	2457	9		21					
	Rossville 5/8, 10		BL	11	0	2		0					
MISSISSIPPI	Stoneville 5/4-10	8.9-29	63.5	2BL	21	6		7	2	5			
OHIO (County)	Wayne 5/3-5		3BL										
TENNESSEE	Selmer 5/5-11		BL BL										
TEXAS	College Station 5/5-9		BL	2	0								
WEST VIRGINIA	Monroe 5/8		BL	3									
WISCONSIN	Lancaster 5/3-9		BL	0									
	Mazomanie 5/3-9		BL	0									

Pest Interceptions of Quarantine Significance at Ports of Entry

Plant Importation and Technical Support Staff
Plant Protection and Quarantine Programs, USDA

<u>Life Stage</u>	<u>Host</u>	<u>Probable Origin</u>	<u>Port of Entry</u>	<u>Desti-nation</u>
<u>uredial</u>	on leaves of <u>Maxillaria</u> from cargo	Colombia	Los Angeles	CA
<u>Anastrepha ludens</u> (Loew) Mexican fruit fly Det. L. Holguin	larval	in sweet oranges from baggage	EI Paso	CA
<u>Ancognatha scarabaeoides</u> Burmeister a scarab Det. R.P. Higgins	adult	with cut flowers of <u>Limonium</u> from cargo	Miami	FL
<u>Callosobruchus phaseoli</u> (Gyllenhal) a bruchid beetle Det. R.S. Taylor	adult	in seeds of <u>Dolichos</u> from baggage	Detroit	MI
<u>Eupithecia</u> sp. a geometrid moth Det. D.M. Weisman	larval	on cut flowers of <u>Limonium</u> from cargo	Israel	NY
<u>Hyllurgops palliatus</u> (Gyllenhal) a scolytid beetle Det. D.M. Anderson	adult	in Dunnage	Netherlands	Cleveland
<u>Pityogenes chalcographus</u> (Linnaeus) a scolytid beetle Det. R.F. Bollinger	adult	in wood crates of glass	Romania	Charleston
<u>Otala vermiculata</u> (Mueller) a helicid snail Det. R. Munkittrick	adult	in passenger baggage	Cyprus	San Francisco

SUMMARY OF PEST CONDITIONS IN THE UNITED STATES - 1978

(Continued from page 272)

MAN AND ANIMALS

INSECTS

HORN FLY (*Haematobia irritans*) infested cattle in OKLAHOMA from the end of March through early November. Numbers ranged 100-600 per head from mid-April to early November except in early June and late August when counts of 1,000+ per head were reported from scattered areas. Infestations in NEBRASKA averaged 100-150 per head on untreated cattle in river pastures in Dawson and Lincoln Counties on June 1. Populations increased to a peak of 500+ per head on June 28, fluctuated between 410+ and 300+ per head through September 27, and decreased to 270 per head by October 5. Adults in NORTH DAKOTA ranged up to 500 per side on beef cattle in the southeastern area, June 26-30.

The first horn fly adults on cattle in MISSISSIPPI were observed in mid-April and populations increased until late June. After this, peak populations remained stable statewide with numbers reduced from those of 1977. Populations in KENTUCKY were about normal, averaging 200-900 per head from late June through early September.

FACE FLY (*Musca autumnalis*) was active in OKLAHOMA in Osage County from late March to early October. Moderate to heavy populations (10-20 per face) were reported through much of the summer from Osage County east through the northeastern counties. Populations remained light all season in other north-central counties. Populations in NEBRASKA averaged 2-3 per face on untreated cattle in river pastures in Dawson and Lincoln Counties, June 1. Populations remained at this level through July 6 and then increased rapidly to 11 per face by July 27. Infestations ranged between 10-14 flies per face through September 27 and decreased to 9 per face by October 5.

Face fly in NORTH DAKOTA averaged 25 per face on beef cattle in the southeastern area June 26-30. Populations in MISSISSIPPI were surprisingly light to almost nonexistent statewide, a sharp decrease from 1977. Hot, dry weather during July and August of 1977 were thought to have greatly reduced the overwintering populations. Infestations in KENTUCKY became active by mid-April. Adults averaged 20-30 per face from mid-June through early September on untreated cattle.

Face fly populations in NEW HAMPSHIRE were much heavier than in 1977. Infestations averaged 25-30 flies per face on young dairy cattle statewide in mid-July. Populations on dairy cattle in Coos County averaged 20-50 per face at Colebrook and 10-20 per face on horses. No infestations were observed in free stall dairy operations. Observations in the northern area indicated a 3 to 4-fold increase in flies per face in 1978 compared to 1977 in late July.

STABLE FLY (*Stomoxys calcitrans*) in NEBRASKA averaged 1 per leg on untreated cattle in feedlots in Dawson and Lincoln Counties on June 1, increased gradually to a peak of 22 per leg on September 14, and decreased to 18 per leg by October 5.

The first stable fly outbreak in FLORIDA occurred in the northwestern area on the beaches in Gulf County, June 28. The first aerial spray of the season was required. The next outbreaks occurred on August 3 at Panama City Beach, Bay County, and in Walton County. Outbreaks began with consistency on August 21, which is normal for the area. Aerial sprays were applied on 6 of the remaining 10 days of August. In September, outbreaks occurred on 10 days. The heaviest and greatest number of outbreaks occurred in October with the beaches experiencing invasions on 15 days. In most of these outbreaks, several or all coastal counties in the "Panhandle" were involved. In past years the season has not extended much beyond mid-October; however, outbreaks were encountered throughout November in 1978. Infestations on beef and dairy cattle and horses were heavier than in 1977, averaging about 5 flies per animal.

Stable fly was unusually heavy throughout MARYLAND during August. Up to 150 per head on Hereford cattle in Garrett County bit severely enough to cause noticeable swelling and irritation at the umbilical area of the cattle. Nuisance levels throughout the Eastern Shore and Chesapeake Bay areas pestered boaters and bathers on the bay and at the ocean.

HOUSE FLY (*Musca domestica*) continued to be the most important economic pest affecting livestock, poultry, and man in SOUTH CAROLINA. Large poultry operations were forced to spend 10-20 cents per bird for house fly control. Annual control cost for this industry alone exceeds \$1 million per year.

The warm, humid weather in the 1978 growing season favored MOSQUITO development in WISCONSIN. Heavy populations were first reported in late May and continued until the first general frost. *Aedes vexans* and *Aedes cinereus* were the species most frequently encountered during daytime surveys.

Adults of BLACK FLIES (*Simulium* spp.) in NORTH DAKOTA annoyed horses in the west-central district by May 5 and in the east-central district by May 19. Populations not only affected residents along rivers, but virtually throughout the Red River Valley. Flooding probably washed the larvae into the lower reaches of many rivers. Adults were moved considerable distances from rivers by strong winds which were occurring the week of May 19. Further reports stated populations were heavier in 1978 than since first observed in 1948. By September 22, adults were emerging and annoying horses in the west-central district.

SHEEP BITING LOUSE (*Bovicola ovis*) developed into serious populations in several flocks in eastern IDAHO. The buildup can be traced to a change in treatment program for SHEEP KED (*Melophagus ovinus*).

ITCH MITE (*Sarcoptes scabiei*) reached epidemic levels in schools in SOUTH CAROLINA and required a tremendous public health effort to suppress and clear up the problem.

HOUSEHOLDS AND STRUCTURES

INSECTS

The first EASTERN SUBTERRANEAN TERMITE (*Reticulitermes flavipes*) swarm of the season in KENTUCKY was reported from Louisville, Jefferson County, April 1, two weeks behind 1977. Infestations in SOUTH CAROLINA continued to account for millions of dollars in property damage and control costs during 1978. Much of this cost occurred due to inadequate treatment procedures.

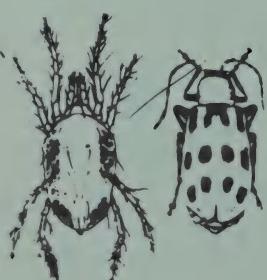
METRIC CONVERSION

1 cm = 0.393701 in
1 m = 3.28084 ft = 1.09361 yd
1 km = 0.621371 mi
1 sq cm = 0.155000 sq in
1 sq m = 10.7639 sq ft = 1.19599 sq yd
1 ha = 2.47104 acres
1 sq km = 0.386101 sq mi
1 kg = 2.20462 lb
1 t (metric ton) = 1.10231 short ton
1 kg/ha = 0.892183 lb/acre
1 t/ha = 0.446091 ton/acre

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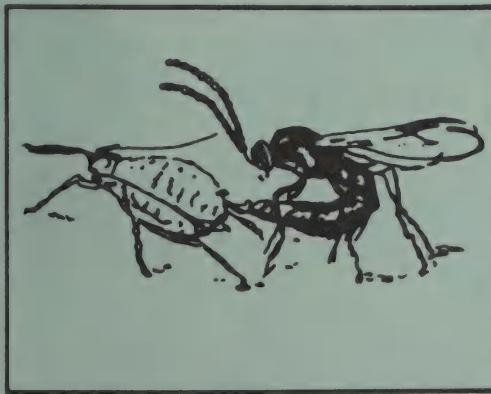
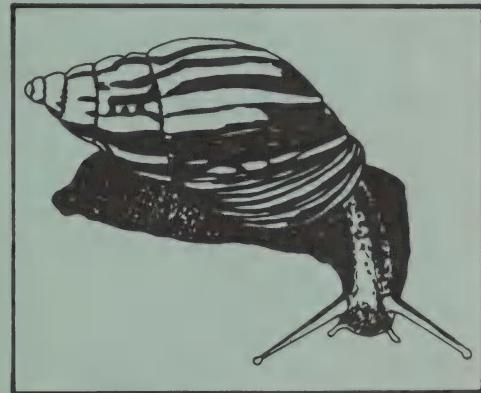
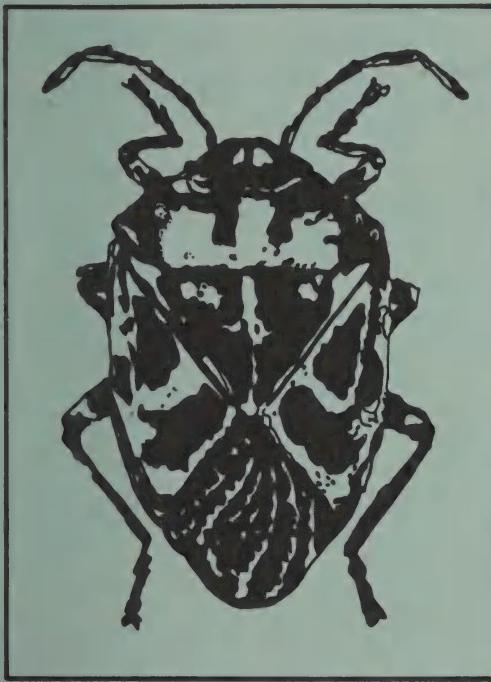
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OF AGRICULTURE

May 25, 1979

Vol. 4

No. 18

Animal
and Plant
Health
Inspection
Service



This publication is distributed weekly to Federal and State agencies, universities, farmers, and others interested in containing or controlling pests in the United States.

Data included in this publication are compiled from reports submitted by cooperating State, Federal and other agricultural and industrial specialists. Accuracy of the reports is not verified prior to publication.

Cooperative Plant Pest Report supersedes *Cooperative Economic Insect Report*, which was discontinued with Volume 25, Numbers 49-52, 1975.

Correspondence should be directed to:

CPPR

New Pest Detection and Survey Staff
Plant Protection and Quarantine Programs
Animal and Plant Health Inspection Service
U.S. Department of Agriculture
Federal Building #1
Hyattsville, Maryland 20782

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COOPERATIVE PLANT PEST REPORT**HIGHLIGHTS**Current Conditions

WHEAT LEAF RUST most active in south-central and east-central Kansas and began to increase in parts of southern and eastern areas. (p. 299).

WHEAT POWDERY MILDEW, TAN SPOT, and SPECKLED LEAF BLOTCH most prevalent foliar diseases on wheat in Kansas. (p. 299, 300).

ALFALFA WEEVIL damage up to 70% in Panhandle area of Oklahoma and defoliated most fields in central and east-central Missouri. Larvae heavy in some fields in western Ohio. Damage early in Michigan. (p. 303-304).

VARIEGATED CUTWORM and sometimes with ALFALFA WEEVIL affected alfalfa regrowth in south-central and central parts of Oklahoma. (p. 305).

Prediction

Potential for ARMYWORM damage to wheat in Oklahoma very high. (p. 300-301).

Detection

ASH BORER is new for California. (p. 313).

For new county records see page 313.

Some First Occurrences of the Season

CORN EARWORM adults and STALK BORER larvae in Kentucky. LOOSE SMUT, YELLOW LEAF BLOTCH, and COMMON LEAF SPOT in Kansas. ALFALFA LOOPER adults in Washington. GREEN CLOVERWORM larvae in Michigan. SOUTHERN CORN ROOTWORM adult in Ohio. STRIPED CUCUMBER BEETLE in Indiana. CODLING MOTH adults in Oregon, Utah, and Arkansas. ORIENTAL FRUIT MOTH adult in Arkansas. LOCUST LEAFMINER adults in Ohio. FALL CANKERWORM larvae in Michigan. GULF COAST TICK in Oklahoma. LILAC BORER adult in Kentucky. EUROPEAN PINE SAWFLY hatch, PINE NEEDLE SCALE crawler, and GYPSY MOTH larvae in Michigan.

Special Reports

Summary of Pest Conditions in the United States - 1978
Beneficial Organisms and Their Enemies (p. 316-318).
Federal and State Programs (p. 318-325).
Contributors (p. 326).

Reports in this issue are for the week ending May 18 unless otherwise indicated.

CONTENTS

Corn, Sorghum, Sugarcane	
Diseases.....	297
Insects.....	297
Small Grains	
Diseases.....	299
Insects.....	300
Turf, Pastures, Rangeland	
Insects.....	302
Forage Legumes	
Diseases.....	302
Insects.....	303
Peanuts	
Insects.....	306
Cotton	
Insects.....	306
Tobacco	
Diseases.....	307
Insects.....	307
Sugar Beets	
Insects.....	307
Miscellaneous Field Crops	
Insects.....	307
Beans and Peas	
Insects.....	307
Cole Crops	
Insects.....	308
Cucurbits	
Insects.....	308
General Vegetables	
Insects.....	308
Deciduous Fruits and Nuts	
Diseases.....	308
Insects.....	309
Ornamentals	
Insects.....	309
Forest and Shade Trees	
Insects.....	309
Man and Animals	
Insects.....	310
Beneficial Organisms and Their Enemies	
Diseases.....	310
Insects.....	310
Federal and State Programs	
Diseases.....	311
Insects.....	311
Hawaii Pest Report.....	313
Detection.....	313
Corrections.....	313
Light Trap Collections.....	314
Pest Interceptions of Quarantine Significance at Ports of Entry.....	315
Summary of Pest Conditions in the United States - 1978	
Beneficial Organisms and Their Enemies	
Diseases.....	316
Insects.....	316
Federal and State Programs	
Diseases.....	319
Insects.....	319
Contributors.....	326

CORN, SORGHUM, SUGARCANE

DISEASES

STEWART'S WILT (Erwinia stewartii) - See CORN FLEA BEETLE (Chaetocnema pulicaria) page 298.

INSECTS

EUROPEAN CORN BORER (Ostrinia nubilalis) - MISSOURI - Area> status on corn: C> pupation 70% and 80% in 2 fields, adults in both fields. (R.E. Munson). ILLINOIS - District> County= status: W> Adams and E> Champaign= pupation about 40% across central area; and SE> Massac= adult emergence about 8%. (K. Black).

INDIANA - District> County= European corn borer status in field of upright cornstalks: SC> Harrison= 8 of 10 pupated and NW> Porter= 2 of 10 pupated. Pupation occurs between 246 and 516 heat units (base 50°F); adults should begin to appear at 423 heat units. Heat unit accumulation (base 50°F) January 1 to May 17: NW> La Porte= 368 at Wanatah; WC> Tippecanoe= 350 at West Lafayette; NC> St. Joseph= 369 at South Bend; NE> Allen= 391 at Fort Wayne; C> Marion= 460 at Indianapolis; and SW> Vanderburgh= 578 at Evansville. (R.W. Meyer).

WISCONSIN - Area> European corn borer on corn: S> pupation began on schedule at several sites. Pupation begins about 137 degree-days (base 10°C). First adults could begin appearing in blacklight and pheromone traps week of May 25. First adult expected at 208 degree-days (base 10°C). (O.L. Lovett).

KENTUCKY - First European corn borer adult of season. District> County= status: Bluegrass> Fayette= adult in light trap May 9. Pupation 62% in 80 overwintered larvae in Lexington area. Currently, adult emergence well underway but no eggs found on about 800 corn [seedling] plants. (G.C. Brown, P.E. Sloderbeck). OHIO - First pupae of season. District> county= status: SW> Butler= larvae 2 and pupae 2 from 10 cornstalks. (G.P. Walker).

BLACK CUTWORM (Agrotis ipsilon) - MISSOURI - Larvae damaged corn in south-western, west-central, northeastern, and central areas. Area> status: WC> damage 3.4-6% in 2 fields, to be replanted (M.E. Roof); NE> stand reduction 10-15% in 1 field, to be replanted (G.W. Thomas); C> light in 4 of 5 corn [seedling] fields (R.E. Munson). IOWA - District> County= adult averages per night in light trap catches May 8-14: NC> Hancock= 3 at Kanawha and SC> Ringgold= 5 at Beaconsfield. (L.H. Townsend).

ILLINOIS - Area> black cutworm on corn: Southern one-half> cut some young plants in scattered areas. (K. Black). WISCONSIN - District> County= status on corn [seedling, 5 cm tall]: SW> Grant= damage 1% in 1 field. (O.L. Lovett).

KENTUCKY - Black cutworm damage in most fields still below economic thresholds. District> County= status on corn: Mid-western> Christian= larvae, 1.27 cm long, cut 60% of plants in no-till field by May 7 (D.E. Foster) and at Simpson= 4% of plants in a field and treatment recommended. (J. Grant, P.E. Sloderbeck).

OHIO - District> County= black cutworm status on corn: NE> Wayne= eggs from captured females have hatched indicating larvae should be present in fields; SW> Preble= damaged young corn [2 leaves] plants, but no larvae found in northern area (G.P. Walker); and C> Licking= 4th to 6th instar larvae damaged 1% of 2 minimum till young corn [emergence to single leaf] fields (S. Clement). VIRGINIA - District> County= damaged 2 corn fields: C> Appomattox= lodging 12%

CORN EARWORM (*Heliothis zea*) - KENTUCKY - First adults of season. District> County= status: Bluegrass> Fayette= collected in light trap. (P.E. Sloderbeck). NORTH CAROLINA - Area> larval status on corn: Southern Coastal> larvae in corn whorls. District> County= status: Southern Coastal> Sampson and Bladen= infested 5 of 8 fields and infested 35-60% of plants in 2 of 8 fields. (T.N. Hunt).

FALL ARMYWORM (*Spodoptera frugiperda*) - MISSISSIPPI - District> County= 2nd to 3rd instar larvae on corn: NE> Lee= found in 1.4 sq m of 12-ha field [25-36 cm tall]; NC> Calhoun, Marshall, and Lafayette, EC> Clay, Monroe, and Chickasaw, C> Webster, and NE> Union= negative on plants [15-36 cm tall] in all fields. (R.E. Anderson).

ARMYWORM (*Pseudaletia unipuncta*) - OKLAHOMA - District> County= larval status: EC> Cherokee= destroyed 1 ha of corn [15 cm tall] in 1 field and SW> Cotton= up to 10 per plant in garden sweet corn. (D.C. Arnold).

DINGY CUTWORM (*Feltia ducens*) - IOWA - District> County= larvae (about 1 cm long) in 3 corn-following-soybean fields (about 40 ha): SC> Warren= damage economic to corn. (L.H. Townsend). INDIANA - District> County= larval status on corn: NC> Fulton= young larvae fed on 50+% of plants in field. Damage not economic now but larvae heavy enough to be economic in later instars; treatment recommended. (R. Abrams).

SANDHILL CUTWORM (*Euxoa detersa*) - ILLINOIS - Status: larvae of this species and DINGY CUTWORM (*Feltia ducens*) damaged field corn and seed corn on sandy soil in some areas. Many fields treated or soon will be. (K. Black).

ARMY CUTWORM (*Euxoa auxiliaris*) - NEBRASKA - District> County= status: E> Lancaster and SE> Clay= adult emergence heavy. (Roselle et al.).

STALK BORER (*Papaipema nebris*) - KENTUCKY - First larvae of season. District> County= status on corn: C> Hardin= larvae 6.4 mm long dissected from plant. (B. Wade).

SUGARCANE BEETLE (*Eutheola rugiceps*) - NORTH CAROLINA - District> County= adults severely damaged field corn: Southern Piedmont> Union, and Central Piedmont> Randolph= stand loss 60-90% in 6 and 2 fields, respectively, 4.0-35 ha in size. All damaged fields planted in 5 to 13-year sod. (P.E. Bazemore, D. Young).

CORN FLEA BEETLE (*Chaetocnema pulicaria*) - KENTUCKY - Adults on corn [10-15 cm tall] in many areas. District> County= adults on corn: Bluegrass> Fayette= average of 0.5 per plant on May 13 increased to 1 per plant by May 16. (G.C. Brown, P.E. Sloderbeck). OHIO - District> County= status on young corn [early whorl]: SW> Hamilton= several adults of this vector of STEWART'S WILT (*Erwinia stewartii*) found. (G.P. Walker).

SOUTHERN CORN BILLBUG (*Sphenophorus callosus*) - NORTH CAROLINA - District> County= status on corn: Southern Coastal> BTaden, Onslow, Pender, and Robeson, and Central Coastal> Johnston= damage continued, 8-12 ha of corn replanted. (T.N. Hunt).

MAIZE BILLBUG (*Sphenophorus maidis*) - MICHIGAN - District> County= status on corn: SW> Berrien= damage about 5% in 1 field. (Hammon).

GREENBUG (Schizaphis graminum) - OKLAHOMA - District> County= counts on newly emerged sudangrass: SW> Tillman= heavy. (D.C. Arnold).

SMALL GRAINS

DISEASES

WHEAT LEAF RUST (Puccinia recondita f.sp. tritici) - KANSAS - Most active in parts of east-central and south-central areas. Began increase in parts of southern and eastern areas. (T. Sim, IV).

District> County	Prevalence (%)	Severity	Host stage
SC> Kiowa	trace	trace	boot to heading
SC> Pratt	trace	trace	heading
SC> Edwards	1	trace	boot
SC> Pawnee	5	trace	boot to heading
EC> Douglas	80	trace	flowering
C> McPherson	trace	trace	heading
SC> Kingman	no data	no data	no data
SC> Reno	no data	no data	no data

RYE LEAF RUST (Puccinia recondita f.sp. secalis) - WISCONSIN - Development well ahead of 1978. Area> status on rye: C> and S> widespread, mostly infected lower leaves, 10-20 lesions per leaf common. (O.L. Lovett).

LOOSE SMUT (Ustilago nuda) - KANSAS - First of season. District> County= status on wheat: EC> Douglas, SC> Harvey, Reno, Kingman, and Kiowa, and C> McPherson= trace in scattered fields. (T. Sim, IV).

WHEAT POWDERY MILDEW (Erysiphe graminis f.sp. tritici) - KANSAS - Still 1 of most common foliar diseases of wheat statewide. Continued to increase in eastern and southern areas, especially in thickly planted and heavily fertilized wheat. (T. Sim, IV).

District> County	Prevalence (%)	Severity	Host stage
EC> Lyon	trace	-	boot
EC> Geary	10	heavy	heading
EC> Douglas	100	light	heading
EC> Johnson	10	light	heading
NE> Jefferson	20	light	joint
C> McPherson	80	moderate	boot to heading
C> Saline	80	light	heading
SC> Pratt	10	moderate	heading
SC> Sedgwick	trace	-	heading
SC> Barber	no data	severe	no data

WISCONSIN - Wheat powdery mildew most prevalent wheat disease in State in 1978, favored by cool, cloudy weather. District> County= status: SE> Racine= infection began on winter wheat. (O.L. Lovett).

TAN SPOT (Pyrenopohora trichostoma) - KANSAS - One of most prevalent foliar diseases of wheat statewide. (T. Sim, IV).

District> County	Prevalence (%)	Severity	Host stage
EC> Wabaunsee	100	light	boot
EC> Lyon	100	light	boot
EC> Osage	60	moderate	boot
EC> Franklin	none seen		boot
EC> Douglas	none seen		flowering
NE> Jefferson	10	light	joint
C> McPherson	100	moderate	heading
SC> Pratt	100	moderate	heading
SC> Sedgwick	90	light	flowering
SC> Kiowa	100	moderate	heading
SC> Pawnee	5	light	flowering

SPECKLED LEAF BLOTCH (Septoria tritici) - KANSAS - Still 1 of most prevalent foliar diseases of wheat statewide. (T. Sim, IV).

District> County	Prevalence (%)	Severity	Host stage
EC> Wabaunsee	none seen		boot
EC> Lyon	trace	-	boot
EC> Osage	100	moderate	boot
EC> Franklin	80	light	boot
EC> Douglas	80	light	flowering
NE> Jefferson	10	light	joint
C> McPherson	40-100	light	heading
SC> Pratt	10	light	heading
SC> Sedgwick	trace to 1	light	flowering
SC> Kiowa	90	moderate	heading
SC> Pawnee	5	light	flowering

WHEAT STREAK MOSAIC VIRUS - KANSAS - District> County= prevalence on wheat: SC> Kiowa= severe, 95% in 1 field. (T. Sim, IV).

INSECTS

ARMYWORM (Pseudaletia unipuncta) - OKLAHOMA - No head damage to wheat in any area, except beard clipping in Cotton County. Potential for damage very high and some fields treated in southwest, south-central, west-central, central, and north-central districts. Many larvae in central and north-central districts still small (6 mm long or less), damage will increase as larvae approach full growth. District> County= larvae per 0.09 sq m unless stated otherwise in wheat fields (f): SW> Jackson= 1-16 with 5+ in 60% of fields, Tillman= 5, and Cotton= 3-12 in some areas, heavy beard clipping in 1f; SC> Pontotoc= 10-30 in Ada area; WC> Washita, Custer, and SW> Caddo= 2-30 with the heavier numbers in rank fields and 5+ in about 50% of fields; C> Grady= 2-30, Oklahoma= 0-4 in 2f, Canadian= from 0-5 in short and thin fields up to 10-40 in rank fields and lodged spots, Kingfisher= 0-4 in 2f, 3-12 in 2f, and 10-25 in 1f, and Logan= up to 5 in some fields and up to 20 in lodged spots in other fields; EC> Muskogee= about 1 per 0.05 sq m; NE> Wagoner= about 1 per 0.05 sq m and 8-10 per 0.09 sq m in several fields in Choska area; C> Payne= 20-30 in spots in 2f; NC> Noble= 5-15 in many fields and 30-40 in spots in some fields, Kay= 5-15 in

many fields and 20-35 in spots in some fields, Grant= armyworm 5-25 at least in spots in many fields, and Garfield= 5-20 in many fields and 20-40 in spots in some fields; and NE> Pawnee= 0-10 in 3f, Osage= 0-3, 10-22, and 1-30 in 1f each, and Mayes= 1 per 0.05 sq m. (D.C. Arnold).

KENTUCKY - Armyworm larvae 6-19 mm long and still light. (P.E. Sloderbeck).

District> County (1 field each)	Larvae	Host	Host stage
Midwestern> Christian	3	wheat	flowering
Purchase> Graves	0	wheat	flowering
Purchase> Hickman	10	barley	dough
Purchase> Hickman	0	oats	30 cm tall
Purchase> Hickman	1	wheat	flowering
Purchase> Marshall	5	wheat	flowering
Purchase> Trigg	0	wheat	flowering

OHIO - Armyworm status on small grains: Adults still heavy in blacklight traps. (D. Wood et al.). Larvae probably already in fields. (R.E. Treence).

VARIEGATED CUTWORM (Peridroma saucia) - OKLAHOMA - Infested many wheat fields in west-central, central, and north-central districts. Generally light, up to 5 or 6 per 0.09 sq m in lodged spots in few fields. District> County= status in wheat: C> Canadian= heavy and some damage in 1 field in Yukon area. (D.C. Arnold).

ARMY CUTWORM (Euxoa auxiliaris) - COLORADO - Area> adult status: E> heavy flights occurred. (W.M. Hantsbarger).

A PYRALID MOTH (Pediasia trisecta) - INDIANA - First adult of season. District> County= adults: WC> Tippecanoe= collected in blacklight trap May 10. (D. Schuder).

WHEAT STEM MAGGOT (Meromyza americana) - OKLAHOMA - District> County= amount of damage in wheat fields (f): WC> Washita= about 5% of heads in 1f; SW> Caddo= about 1% in 1f; and NC> Noble and NE> Pawnee= very light in few fields. (D.C. Arnold).

ENGLISH GRAIN APHID (Macrosiphum avenae) - OKLAHOMA - District> County= counts in occasional wheat heads in 1 field each: NE> Pawnee= up to 20 and NC> Kay= up to 10. (D.C. Arnold).

AN APHID (Rhopalosiphum padi) - OKLAHOMA - Small colonies on wheat heads in scattered fields in central, north-central, east-central, and northeast districts. District> County= counts per plant on wheat leaves: C> Grady= up to 20 in several fields. (D.C. Arnold).

CHINCH BUG (Blissus leucopterus leucopterus) - OKLAHOMA - District> County= counts per 0.3 row m of wheat: C> Payne= averaged 1 or 2 in 2 fields. (D.C. Arnold). NEBRASKA - District> County= adults per 0.3 row m of wheat: E> Lancaster= averaged 20 in 1 field. (Raun).

TURF, PASTURES, RANGELAND

INSECTS

ARMYWORM (*Pseudaletia unipuncta*) - OKLAHOMA - District> County= counts per 0.09 sq m of pasture: SE> Choctaw= 5-30, generally widespread. (D.C. Arnold). MISSOURI - Light to moderate in grasses [heading] in central area. Area> larvae per 0.09 sq m: C> 0-4 in fescue and 1-5 in orchardgrass. (R.E. Munson).

VARIEGATED CUTWORM (*Peridroma saucia*) - OKLAHOMA - District> County= counts per 0.09 sq m of pasture: SE> Choctaw= up to 5 in spots in some areas. (D.C. Arnold).

FORAGE LEGUMES

DISEASES

SPRING BLACK STEM (*Phoma medicaginis*) - KANSAS - Continued to affect first alfalfa cutting. Infections seemed not as severe as in 1978. Cutting underway in parts of central and eastern areas. Defoliation in all fields surveyed. (T. Sim, IV).

District> County	Prevalence (%)	Severity	Host height (cm)
EC> Douglas	100	light	61
EC> Wabaunsee	100	moderate	66
EC> Osage	100	moderate	66
NE> Jackson	80	moderate	61
NE> Doniphan	100	moderate	53
NE> Atchison	100	severe	53
C> McPherson	100	light	50

LEPTO LEAF SPOT (*Leptosphaerulina briosiana*) - KANSAS - Continued to affect first alfalfa cutting. Infections seemed not as severe as in 1978. Cutting underway in parts of central and eastern areas. Defoliation in all fields surveyed. (T. Sim, IV).

District> County	Prevalence (%)	Severity	Host height (cm)
EC> Douglas	90	light	61
EC> Wabaunsee	trace	-	66
EC> Osage	none seen		66
NE> Jackson	none seen		61
NE> Doniphan	100	moderate	53
NE> Atchison	none seen		53
C> McPherson	none seen		50

STEMPHYLIUM LEAF BLIGHT (*Stemphylium botryosum*) - KANSAS - District> County= status on alfalfa: EC> Wabaunsee= trace in 1 field. (T. Sim, IV).

YELLOW LEAF BLOTCH (*Pseudopeziza jonesii*) - KANSAS - First of season. District> County= status on alfalfa: C> McPherson= began to affect 1 field. (T. Sim, IV).

COMMON LEAF SPOT (*Pseudopeziza medicaginis*) - KANSAS - First of season. District> County= status on alfalfa: SC> Kingman= trace in 1 field. (T. Sim, IV).

INSECTS

ALFALFA WEEVIL (*Hypera postica*) - UTAH - District> County= larvae in alfalfa fields (f): S> Beaver= ~~larvae~~ averaged 1-2 per 25 sweeps in 11f (0 in 6f and 1-5 in 5f) and adults averaged 2-3 per 25 sweeps (12 in 1f) and 6 and 3 in other fields) in Milford area (D.W. Davis), and N> Cache= larvae 10-20 per 10 sweeps, adults recently increased (L. Jech). MONTANA - Area> status in alfalfa: C and E> adults active. (G.L. Jensen).

OKLAHOMA - District> County= alfalfa weevil status in forage legumes: Pan-handle> Texas= larvae heavy, infested up to 70% of terminals for first time this season, and NE> Craig, Wagoner, and EC> Muskogee= decreased. (D.C. Arnold). NEBRASKA - District> County= status per 100 sweeps of alfalfa fields (f): C> Dawson= larvae 0-19 (averaged 1.29) and adults 0-16 (averaged 4.25) in 24f (Manglitz), and SE> Otoe= no larvae or adults in 24f (Stevens).

MISSOURI - Area> alfalfa weevil status in untreated, uncut forage legume fields: C and EC> larvae heavy, 5-30+ per plant; terminal damage on 100% of plants, most fields defoliated. (R.E. Munson). IOWA - District> County= status on alfalfa: NE> Clayton= eggs 41, 9, and 19 per 0.1 sq m in 3 fields May 7, and currently, eggs 92, 0, and 66, and adults averaged 1.6 per sweep, and Allamakee= eggs 9 and 41 per 0.1 sq m in 2 fields. (J.R. DeWitt, J.C. Hosch).

ILLINOIS - Area> alfalfa weevil status on alfalfa: North of U.S. Highway 36> larvae 3-40 per 30 stems, generally subeconomic; occasional fields sustained damage. Between U.S. Highways 36 and 136> alfalfa averaged about 51 cm tall [mostly early bud]. Degree-day accumulation as of May 14 follows. (K. Black).

District> County	Station	Degree-days as of May 14 (base 8.9 oC)
NW> Winnebago	Rockford	165
W> Adams	Quincy	272
C> Mason	Kilbourne	223
E> Champaign	Urbana	221
ESE> Fayette	Brownstown	249

INDIANA - Alfalfa buds trace in all 4 districts surveyed. Alfalfa weevil larvae 0-3, mostly near 2, per infested alfalfa stem. Hatch seems underway in northern districts. Fields treated early in southern one-third of State began to show damage; since most in bud, cutting should take care of problem. District> average percent infestation (range) [average host height] in number of fields (f): NW> 4.8% (0-12%) [36 cm] in 5f; NC> 38% (12-56%) [34 cm] in 4f; NE> 47% (40-60%) [40 cm] in 6f; and EC> 65% (28-80%) [37 cm] in 4f. District> County= heat unit accumulation (base 48°F) January 1 to May 17: NW> La Porte= 432 at Wanatah; WC> Tippecanoe= 419 at West Lafayette; NC> St. Joseph= 430 at South Bend; NE> Allen= 462 at Fort Wayne; C> Marion= 452 at Indianapolis; and SW> Vanderburgh= 679 at Evansville. (R.W. Meyer).

OHIO - Alfalfa weevil larvae heavy in most fields surveyed; damage noticeably heavier in southern area than in northern area. District> County= status in 1 field: WC> Mercer= alfalfa cut. (G.P. Walker):

District> County	Larvae per sweep	Adults per sweep	Host height (cm)
SW> Hamilton	35	0.6	61
SW> Butler	0.6	less than 0.01	56
SW> Butler	104	1.2	58
SW> Preble 1/	56	0.2	61
SW> Preble <u>1/ 2/</u>	0.2	0.3	69
WC> Darke	31	0.9	51
WC> Mercer	104	0.6	41
NW> Putnam <u>1/</u>	80	0.8	43

WISCONSIN - Alfalfa weevil hatch underway in south-central and southwestern counties, mainly in lighter soils along Wisconsin River. Mating and egg laying continued in west-central, south-central, and southeastern areas. District> County= status on alfalfa: SC> Green= pinhole feeding on 5-10% of tips in some fields, SW> Sauk and Iowa and SC> Dane= feeding evidence on about 1% of tips in Spring Green and Mazomanie areas. Dane= 7 larvae in Berlese funnel extraction of 30 stems from southern field. SW> Lafayette, Iowa, and Sauk, SC> Dane and Columbia, WC> La Crosse, and SE> Waukesha= egg clusters 0-3 per 10 alfalfa stems [30-51 cm tall], heaviest in Sauk County; SC> Jefferson and SE> Racine and Waukesha= egg clusters lighter. Adults ranged from 2 per 10 sweeps to 2.5 per sweep, field averages in surveyed area higher than in 1978. District> County= degree-day accumulation (base 8.9°C) March 1 to May 16: SC> Dane= 145.6 at Madison; SE> Washington= 127.2 at Hartford; EC> Outagamie= 91.67 at Appleton; WC> Dunn= 95.00 at Menomonie; C> Waushara= 131 at Hancock; and SW> Grant= 133 at Lancaster. (O.L. Lovett).

MICHIGAN - Alfalfa weevil damage early and problems possible. (R. Ruppel). District> County= status in alfalfa: SW> Cass, SC> St. Joseph, Jackson, and Shiawassee, and C> Gratiot= damage began to show (B. Hammon et al.); EC> Sanilac and Saginaw and SC> Barry= populations still light (R. Seiting et al.).

LESSER CLOVER LEAF WEEVIL (Hypera nigrirostris) - OHIO - Status on alfalfa May 14-16 (G.P. Walker):

District> County	Adults per sweep	Host height (cm)
SW> Hamilton	less than 0.01	61
SW> Butler	less than 0.01	56
SW> Butler	less than 0.01	58
SW> Preble 1/	less than 0.01	61
SW> Preble <u>1/ 2/</u>	0.04	69
WC> Darke	less than 0.01	51
WC> Mercer	less than 0.01	41
NW> Putnam <u>1/</u>	0.7	43

1/ Alfalfa mixed with clover

2/ Mostly clover

VARIEGATED CUTWORM (*Peridroma saucia*) - OKLAHOMA - District> County= larvae per 0.09 sq m of regrowth alfalfa fields (f): SC> Stephens= up to 15 (averaged 10); C> Grady= up to 34 (average 16) and Payne= up to 25 (average 12); SC> Stephens, Garvin, and Murray, and C> McClain, Cleveland, Pottawatomie, Lincoln, and Oklahoma= this species and ALFALFA WEEVIL (*Hypera postica*) heavily damaged 17 of 23f after first cutting, regrowth held back 2-3 weeks in some fields; C> Grady and WC> Washita= much damage under windrows by both species with variegated cutworm up to 6; NE> Craig, Wagoner, and EC> Muskogee= infestations heavy on regrowth and in uncut fields; Noble= up to 6 in 1f; and SW> Jackson= averaged 12 under windrows in 1f and 3 in regrowth, and Cotton= 3 in regrowth. (D.C. Arnold).

NEBRASKA - District> County= variegated cutworm status on forage legumes: E> Lancaster= adults heavy and egg laying well underway. (Roselle, Miller).

ALFALFA LOOPER (*Autographa californica*) - WASHINGTON - First adults of season. District> County= adults in traps April 23: W> Snohomish= 2, Skagit= 1, and Whatcom= 3. Averages per trap April 30 and May 7, respectively: W> Snohomish= 13 and 53, Skagit= 38 and 65, and Whatcom= 1 and 6; totaled 266 (average 24) and 627 (average 57) per trap. Adult counts about same compared to 1978 counts which peaked May 30. (P.M. Eide).

ARMYWORM (*Pseudaletia unipuncta*) - MICHIGAN - District> County= larvae per 20 sweeps of alfalfa: SW> Berrien= 2-3. (B. Hammon).

GREEN CLOVERWORM (*Plathypena scabra*) - MICHIGAN - First larvae of season. District> County= Larvae: EC> SaniTac= found in alfalfa. (Sieting).

ALFALFA CATERPILLAR (*Colias eurytheme*) - WISCONSIN - District> County= nearly full-grown larvae per 25 sweeps of alfalfa: C> Adams and Waushara= up to 8, lighter in some southern counties. (O.L. Lovett).

ALFALFA WEBWORM (*Loxostege commixtalalis*) - COLORADO - District> County= status: N> Larimer= heavy adult flights in Ft. Collins area. (W.M. Hantsbarger).

PEA APHID (*Acyrthosiphon pisum*) - UTAH - District> County= status in 11 forage legume fields (f): S> Beaver= 100 in 25 sweeps in 1f, 50 in 2f, and 0-30 and 25 in 25 sweeps in 8f in Milford area. (D.W. Davis). OKLAHOMA - District> County= status on alfalfa: Panhandle> Harper, Ellis, Beaver, and Texas= generally light in all areas, made up 70-100% of Acyrthosiphon population. (D.C. Arnold).

MINNESOTA - First pea aphid of season. District> County= status on alfalfa: C> Scott, EC> Ramsey, and SE> Dakota= averaged 2 per 5 sweeps in 15 fields. (D.D. Sreenivasam). WISCONSIN - Increased slightly from past week. Area> counts per 25 sweeps of alfalfa: Southern one-third area and WC District> La Crosse County= 1-75. (O.L. Lovett).

BLUE ALFALFA APHID (*Acyrthosiphon kondoi*) - UTAH - District> County= status on alfalfa: S> Washington= this species and PEA APHID (*Acyrthosiphon pisum*) decreased, due to many lady beetles and other predators in St. George, Santa Clara, Hurricane, and Washington areas; blue alfalfa aphid populations noticeable in 1 field, 0-5 per 20 sweeps in other fields. (D.W. Davis).

OKLAHOMA - District> County= blue alfalfa aphid status on alfalfa: Panhandle> Ellis, Harper, Beaver, and Texas= still most common aphid in most areas except in far northwest district where it is only 0-30% of Acyrthosiphon population and C> Payne= 350 per 10 sweeps May 12, heaviest to date. (D.C. Arnold).

POTATO LEAFHOPPER (Empoasca fabae) - ILLINOIS - District> County= adults per 50 sweeps: W> Brown= 3 in alfalfa field and ESE> Marion= 8 in fall-seeded alfalfa field. (K. Black).

LYGUS BUGS (Lygus spp.) - ARIZONA - District> County= nymphs and adults, respectively, per 100 sweeps of alfalfa: C> Pinal= 1,040 and 334 and Maricopa= 15-170 and 45-120 and SE> Graham= 0 and 200. (T. McCall et al.). MONTANA - District> County= status on alfalfa: SE> Rosebud= 1st instar noted. C and E areas> adults active. (G.L. Jensen).

TARNISHED PLANT BUG (Lygus lineolaris) - MINNESOTA - District> County= adult averages per 5 sweeps of alfalfa [20 cm tall]: C> Scott, EC> Ramsey, and SE> Dakota= 2. (D.D. Sreenivasam). OHIO - Status on alfalfa May 14-16 (G.P. Walker):

District> County	Adults per sweep	Host height (cm)
SW> Hamilton	0.4	61
SW> Butler	less than 0.01	56
SW> Butler	0.2	58
SW> Preble 1/	less than 0.1	61
SW> Preble 1/ 2/	0.4	69
WC> Darke	less than 0.2	51
WC> Mercer	less than 0.1	41
NW> Putnam 1/	0.1	43

1/ Alfalfa mixed with clover

2/ Mostly clover

MIGRATORY GRASSHOPPER (Melanoplus sanguinipes) - MISSOURI - Area> counts per 10 sweeps of alfalfa and red clover: Southern> small nymphs, mostly 2nd instar, ranged 3-8. (R.E. Munson).

PEANUTS

INSECTS

TOBACCO THrips (Franklinella fusca) - FLORIDA - District> County= status per untreated peanut bud: NW> Jackson= averaged 2.2, immatures 2% and adults 98% at Greenwood. Averaged 1.7 at same time in 1978. (W.B. Tappan).

COTTON

INSECTS

A THrips (Franklinella sp.) - MISSISSIPPI - Area> status on cotton [seedling]: Statewide> caused problems, isolated fields treated. (R.E. Anderson).

TOBACCO

DISEASES

POTATO VIRUS Y - FLORIDA - District> County= status on tobacco: NE> Suwannee= vein-banding symptoms increased at Live Oak, much more prevalent than at same time in 1978. (W.B. Tappan).

INSECTS

TOBACCO BUDWORM (*Heliothis virescens*) - FLORIDA - District> County= status on tobacco: NE> Suwannee= population about same as last 2 weeks on untreated tobacco at Live Oak, damaged about 30% of plants. (W.B. Tappan). NORTH CAROLINA - Infestations on early set plants increased rapidly in southern half of coastal plain. District> County= infestations on tobacco: Central Coastal> Lenoir= 20-30% in many fields, Greene= averaged 5% with highest of 12% in 5 fields; and Southern Coastal> Sampson= averaged 8% with occasional field above 10% threshold level. (B. Ellers, A. Harper).

TOBACCO HORNWORM (*Manduca sexta*) - FLORIDA - District> County= status on tobacco: NE> Suwannee= increased at Live Oak last 2 weeks, damaged 2% of untreated plants. (W.B. Tappan).

GREEN PEACH APHID (*Myzus persicae*) - FLORIDA - District> County= counts on untreated tobacco: NE> Suwannee= increased from 2 to 10 per plant past 2 weeks. (W.B. Tappan).

SUGAR BEETS

INSECTS

LYGUS BUGS (*Lygus spp.*) - UTAH - District> County= nymphs and adults per 10 sweeps of seed sugar beets: S> Washington= 50-60 and 1-3 at Hurricane. (D.W. Davis).

MISCELLANEOUS FIELD CROPS

INSECTS

CORN EARWORM (*Heliothis zea*) - SOUTH CAROLINA - District> County= larvae per 25 sweeps of sunflowers: S> Barnwell= averaged 4 in 1.2-ha field near Blackville. (G.S. McCutcheon).

SUGARCANE BEETLE (*Eutheola rugiceps*) - SOUTH CAROLINA - District> County= status on sunflowers: C> Lee= beetles on plants (D.G. Manley) and Clarendon= adults heavily infested 0.8 ha near Manning, averaged 6 per infested plant; damage heavy. (D. White).

BEANS AND PEAS

INSECTS

MEXICAN BEAN BEETLE (*Epilachna varivestis*) - INDIANA - First adult of season. District> County= adults on alfalfa: WC> Owen= swept from field May 9. (R.W. Meyer).

OHIO - First Mexican bean beetle adults of season. District> County= status: SW> Hamilton= collected from alfalfa. (G.P. Walker).

COLE CROPS

INSECTS

DIAMONDBACK MOTH (Plutella xylostella) - FLORIDA - District> County= status on cabbage: C> St. Johns= Larvae decreased from about 10 to 2-3 per plant at Hastings. Decrease due to 127 mm of rain during 10-day period. Many larvae washed off plants or into hollows of leaves and drowned. Larvae tunneled into tops of mature cabbage heads, becoming heavy in untreated cabbage up to time of rain. (R.B. Workman).

IMPORTED CABBAGEWORM (Pieris rapae) - FLORIDA - District> County= status on untreated cabbage: C> St. Johns= still light, averaged 2 per 10 plants. (R.B. Workman).

CABBAGE MAGGOT (Hylemya brassicae) - OHIO - District> County= status on cabbage: WC> Champaign and SW> Greene= eggs heavy, controls applied. (D. Kelly).

CUCURBITS

INSECTS

SOUTHERN CORN ROOTWORM (Diabrotica undecimpunctata howardi) - OHIO - First adult of season. District> County= adults: SW> Preble= in wheat field. (G.P. Walker).

STRIPED CUCUMBER BEETLE (Acalymma vittata) - INDIANA - First adult of season. District> County= adults: WC> Vermillion= swept from alfalfa field May 8, occasionally swept on subsequent days. (R.W. Meyer).

GENERAL VEGETABLES

INSECTS

ONION MAGGOT (Hylemya antiqua) - MICHIGAN - Adults expected to begin emerging from overwintering pupae now in some locations or within next few days according to degree-day accumulation. Egg laying expected to begin within 7-10 days. (E. Grafius).

ASTER LEAFHOPPER (Macrosteles fascifrons) - WISCONSIN - Found in additional counties. District> County= average per 100 sweeps of vegetables: SC> Columbia and SE> Racine and Walworth= 1, light. (O.L. Lovett).

DECIDUOUS FRUITS AND NUTS

DISEASES

CEDAR-APPLE RUST (Gymnosporangium juniperi-virginianae) - KANSAS - District> County= status: NE> Riley= galls of this species and CEDAR-HAWTHORN RUST (Gymnosporangium globosum) actively released spores at Manhattan. (T. Sim, IV).

APPLE SCAB (*Venturia inaequalis*) - VERMONT - County= percent spore immaturity, percent spore maturity May 10-17, and infection period on apple May 12-14: Windham at Putney= 56%, 3%, and heavy, Addison at Shoreham= 12%, 40%, and moderate, Grand Isle at South Hero= 21%, 38%, and light, and Bennington at Bennington= 19.0%, 4.0%, and no data. (R.E. Desrosiers).

INSECTS

CODLING MOTH (*Laspeyresia pomonella*) - OREGON - First adult of season. County= status: Jackson= adults trapped in Medford area April 19. Populations increased in late April, decreased May 7-11 due to cold weather. Models predicted first egg laying May 8 and first hatch May 27. (D. Berry). UTAH - First adult of season. District> County= status in pheromone trap: N> Cache= adult at Smithfield, May 14. (J.B. Karren). ARKANSAS - First adult of season. District> County= status in pheromone traps: NW> Washington and Carroll= adults trapped April 19. (D.T. Johnson).

ORIENTAL FRUIT MOTH (*Grapholitha molesta*) - ARKANSAS - First adult of season. District> County= dates adults in pheromone traps: WC> Johnson= March 29; NW> Washington= March 30; and SW> Howard= April 9. (D.T. Johnson).

EUROPEAN RED MITE (*Panonychus ulmi*) - OHIO - District> County= status on Red Delicious apple trees: C> Fairfield= light, 1 per 20 leaves, on integrated controlled trees. Adult females and new eggs on foliage indicated second generation began. (R.P. Holdsworth). MAINE - County= egg and mite status on apple trees: Kennebec= overwintered eggs nearly all hatched, mites found on new leaf growth. Mite spread in trees will start as soon as vegetative buds begin to open. (A. Gall).

ORNAMENTALS

INSECTS

LILAC BORER (*Podosesia syringae*) - KENTUCKY - First of season. District> County= status: C> Jefferson= caught in pheromone trap April 26. (D.A. Potter).

DICTYOSPERMUM SCALE (*Chrysomphalus dictyospermi*) - FLORIDA - New county and host record. District> County= collection data on Serenoa repens (saw palmetto): S> Hardee= adults collected near Zolfo Springs, April 19, 1979, by J.T. Felty. Determined by A.B. Hamon. (F.W. Mead).

FOREST AND SHADE TREES

INSECTS

EUROPEAN PINE SAWFLY (*Neodiprion sertifer*) - MICHIGAN - First egg hatch of season. District> County= status: SC> Ingham= occurred May 6. Degree-day accumulation (base 10°C) 63.3. (M.K. Kennedy).

PINE NEEDLE SCALE (*Chionaspis pinifoliae*) - VIRGINIA - District> County= status on Japanese black pine: SE> Independent City of Virginia Beach= hatching began. (J.L. Garner). OHIO - District> County= egg status: NE> Lake= hatched. (D.G. Nielsen). MICHIGAN - First crawler of season. District> County= status: SE> Oakland= crawlers observed May 15 (Corneil). Egg hatch expected to be completed in next several days as temperatures warm up (K. Kennedy).

LOCUST LEAFMINER (*Odontota dorsalis*) - OHIO - First adults of season. District> County= adults: SW> Hamilton= collected from alfalfa and wheat, Butler= collected from alfalfa, and Preble= collected from wheat. (G.P. Walker).

FALL CANKERWORM (*Alsophila pometaria*) - MICHIGAN - First egg hatch of season. District> County= egg status: C> Midland at Midland and SW> Ottawa at Holland= hatched May 5 and 6, and Cass= egg masses heavy on oaks and some defoliation expected in May. Young larvae began feeding on expanding leaves of many deciduous trees. (K. Kennedy).

ASH BORER (*Podosesia syringae*) - OHIO - District> County= adult status: WC> Auglaize= first emergence detected by using conrel borer traps. (D.G. Nielsen).

MAN AND ANIMALS

INSECTS

HORN FLY (*Haematobia irritans*) - OKLAHOMA - District> County= counts per head on cattle: NC> Major= 200-450; WC> Washita= up to 200; C> Payne and NC> Noble= averaged 100; and EC> Pittsburg= 50. (D.C. Arnold). NEBRASKA - District> County= status on untreated cattle: SW> Lincoln and C> Dawson= averaged 50 per head. (Campbell). MISSOURI - Area> average per side on cattle: NC> light, averaged 10. (R.D. Hall). IOWA - District> County= counts per head on mixed Hereford and Angus cattle herd: C> Story= fewer than 2, first observed May 15. (L.H. Townsend). FLORIDA - District> County= average per animal in small beef herd: C> Alachua= 380 at Newberry. (D. Boyd).

FACE FLY (*Musca autumnalis*) - NEBRASKA - District> County= status on untreated cattle: SW> Lincoln and C> Dawson= averaged less than 1 per face. (Campbell). MISSOURI - Area> counts per face: NC> light, averaged 2. (R.E. Munson).

GULF COAST TICK (*Amblyomma maculatum*) - OKLAHOMA - First of season. District> County= status on ears in herd of calves: EC> Pittsburg= light. (D.C. Arnold).

BENEFICIAL ORGANISMS & THEIR ENEMIES

DISEASES

INSECT FUNGI (*Entomophthora* spp.) - INDIANA - District> County= status: SC> Harrison= destroyed *Hypera postica* (alfalfa weevil) larval populations. Larvae all dead within 3 days of collection for rearing from infected fields. Larvae from Ripley and Franklin Counties and other counties north and west of these showed no symptoms to date. (M.C. Wilson, R.W. Meyer). KENTUCKY - District> County= prevalence of *Entomophthora phytonomi*: Bluegrass> Fayette= epizootic condition on *Hypera postica* (alfalfa weevil) larvae in Lexington area week ending May 11. (P.E. Stoderbeck).

INSECTS

AN ICHNEUMONID WASP (*Bathyplectes curculionis*) - OKLAHOMA - District> County= percent parasitized *Hypera postica* (alfalfa weevil) larvae in alfalfa (peak season April 21 to May 8): Panhandle> Beaver= 27%, Texas= 8%, and Ellis= 34%; NC> Alfalfa= 41%, Woods= 26%, Woodward= 26%, Garfield= 54%, Grant= 37%, and Kay= 43%; C> Payne= 49%, Cleveland= 35%, Grady= 44%, Lincoln= 28%, Logan= 24%, and Pottawatomie= 28%; NE> Craig= 31%, Washington= 29%, and Wagoner= 32%; SW> Caddo= 67%, Comanche= 1%, Jackson= 3%, and Kiowa= 8%; WC> Washita= 29%; and SC>

Carter= Bathyplectes curculionis parasitized 40% of alfalfa weevil larvae, Garvin= 11%, Johnston= 40%, Marshall= 20%, Murray= 39%, and Stephens= 51%; statewide average 31.2%, decreased from 37.6% in 1978 and 50.4% in 1977. (D.C. Arnold).

OHIO - District> County= status of B. curculionis, a parasite of Hypera postica (alfalfa weevil) larvae, on alfalfa: WC> Mercer and Darke, SW> Preble and Butler, and NW> Putnam= collected. (G.P. Walker).

A GREEN LACEWING (Chrysopa sp.) - OHIO - District> County= adult on wheat: SW> Hamilton= 1. (G.P. Walker).

FEDERAL AND STATE PROGRAMS

DISEASES

BLACK STEM RUST (Puccinia graminis) - WISCONSIN - Presence of aecial stage 2 weeks earlier than in 1978 indicates potential for development on small grains. District> County= status on European barberry: SW> Iowa= yellow, cluster cup stage moderate. (O.L. Lovett).

INSECTS

CEREAL LEAF BEETLE (Oulema melanopus) - INDIANA - District> County= averages per 25 stems of barley: SC> Harrison= larvae 7 and eggs about 4 in 1 field. (R.W. Meyer). MICHIGAN - District> County= eggs and adults on oats: SW> Kalamazoo= common (B. Hammon). Damage expected to start in 7 days (R. Ruppel).

OHIO - Area> cereal leaf beetle status: S> larvae on oats and wheat; N> eggs probably have not hatched but will soon. District> County= larval status: SW> Hamilton= larvae heavy in 1 oat field adjacent to wheat [heading] field. Status on small grains May 14-16 (G.P. Walker):

District> County	Eggs per stem	Larvae per sweep	Adults per sweep	Host	Host stage
SW> Hamilton	-	less than 0.02	0.18	wheat	ear unsheathed
SW> Hamilton	-	1.75	2.64	oats	leaf sheaths lengthened to erected
SW> Butler	-	0.01	0.04	wheat	three-fourths headed
SW> Preble	0.17	less than 0.01	0.76	wheat	boot
WC> Darke	0.03	less than 0.01	0.04	wheat	boot
WC> Darke	0.03	less than 0.01	less than 0.01	wheat	last ligule
NW> Putnam	0.03	less than 0.01	less than 0.01	wheat	last ligule
NW> Putnam	0.03	less than 0.01	less than 0.01	wheat	last ligule

A GRASS BUG (Irbisia brachycera) - UTAH - District> County= status on range grass: C> Millard= aerial controls applied near Oak City May 15. (T. Crowe, D.W. Davis).

GRASSHOPPERS - COLORADO - District> County= status: 1st instar Melanoplus sp. nymphs on alfalfa: EC> Yuma= light in 1 field at Wray. (W.M. Hantsbarger). WYOMING - District> County= 1st instar Melanoplus spp., Aulocara ellioti, Ageneotettix deorum, and Amphitornus coloradus per 0.8 sq m: SE> Goshen at North Lingle and Platte at West Guernsey= 20-30 and Laramie at South Cheyenne= A. coloradus 10-15. (Gentle). MONTANA - District> County= status: SE> Rosebud= first hatch May 4. (A. Helland).

OKLAHOMA - District> County= counts per 0.8 sq m: EC> Pittsburg, SC> Atoka and Coal= 1st to 3rd instar and few 4th instar Melanoplus bivittatus, Melanoplus differentialis, Melanoplus packardii, and Boopedon nubilum nymphs up to 15 in pastures, few Melanoplus occidentalis adults found, Carter, Johnston, and Murray= same species and stages, except M. occidentalis, up to 25 in favorable habitats. A. deorum, A. ellioti, Phlibostroma quadrimaculatum, A. coloradus, Cordillacris sp., and M. packardii in rangeland: WC> Roger Mills= 1st to 3rd instar 7-30, Dewey= up to 15; Panhandle> Ellis= up to 20, and Beaver= mostly 1st instar up to 25; NC> Major= mostly Melanoplus spp. 5-25 in grass cover in orchard, damage light to young fruit trees; Panhandle> Texas= undetermined species 10-12 in rangeland in western area; SC> Bryan and C> Okfuskee= heavy in pastures, bermudagrass pastures treated in latter county. (D.C. Arnold).

NEBRASKA - District> County= status: SW> Lincoln= hatch well underway and some Melanoplus sanguinipes reached 3rd instar. (Campbell, Keith).

GYPSY MOTH (Lymantria dispar) - WASHINGTON - District> County= status: W> King= overwintered egg masses hatched in Bryn Marr area of Seattle, treatments planned beginning May 21 in areas of known activity. (R.F. Harwood).

WISCONSIN - Area> gypsy moth eggs: Oconomowoc> hatching, treatment program scheduled May 23 or 24. (O.L. Lovett). MICHIGAN - First of season. District> County= status: C> Isabella= larvae hatched May 7. Montcalm= larval hatch heavy, May 9. Hatch currently well underway, many larvae resting on surface of egg masses before migrating to foliage. District> County= status on beech and witch-hazel: C> Montcalm= 1st instar larvae fed, sometimes in groups of 3 or 4, on expanding leaves. (M. Hanna).

PENNSYLVANIA - Area> gypsy moth larvae: Eastern two-thirds of State> noted April 25 to May 3. (J.R. Raub et al.). NEW HAMPSHIRE - Area> County= status May 7-14: Statewide> hatch completed, larval growth rapid in southern area. Larvae taken from eggs at Conway last fall appeared heavily infected with a disease. (J.F. Burger).

PINK BOLLWORM (Pectinophora gossypiella) - ARIZONA - District> County= counts from 4 pheromone traps May 9, 11, 14, and 16: SW> Yuma= 1, 2, 7, and 11. (Mullis).

SCREWWORM (Cochliomyia hominivorax) - Total of 4 cases reported from continental United States April 22-28 as follows: Texas 1, New Mexico 2, Arizona 1. Number of sterile flies released this period totaled 28,605,406 as follows: Texas 16,016,006; New Mexico 2,456,000; Arizona 9,753,400; California 380,000. Total of 152,286,114 sterile flies released within eradication zone April 15-28. (J.E. Novy, M.E. Meadows).

HAWAII PEST REPORT

Beneficial Insects - Mostly full-grown larvae and pupae of LANTANA HISPID (Uroplata girardi) on roadside lantana between Hana and Kipahulu, Maui Island; mining heavy. (N. Miyahira, E.R. Yoshioka).

DETECTION

NEW STATE RECORD

INSECTS

ASH BORER (Podosesia syringae) - CALIFORNIA - District> County= collection data: Sacramento Valley> Sacramento= collected from experimental live-trap baited with clearwing moth sex attractant at Sacramento by T. Eichlin, May 14, 1978; 3 more adults trapped there May 15. Determined by T. Eichlin. (C.S. Papp).

NEW COUNTY RECORDS

INSECTS

DICTYOSPERMUM SCALE (Chrysomphalus dictyospermi) - FLORIDA - Hardee. (p. 308).

WEEDS

TANSY RAGWORT (Senecio jacobaea) - CALIFORNIA - District> County= collection data: Sacramento Valley> Glenn= specimens collected from riparian woodlands near Willows, June 20, 1978, and near Elk Creek by J. Willoughby. Determined by J. Willoughby; confirmed by D. Barbe and T. Fuller. (C.S. Papp).

CORRECTIONS

CPPR 4(16):264 - Pest Interceptions of Quarantine Significance at Ports of Entry - Delete all information for Parlatoria proteus (Curtis). (PITTS).

LIGHT TRAP COLLECTIONS

Pest Interceptions of Quarantine Significance at Ports of Entry

Plant Importation and Technical Support Staff
Plant Protection and Quarantine Programs, USDA

	<u>Life Stage</u>	<u>Host</u>	<u>Probable Origin</u>	<u>Port of Entry</u>	<u>Desti-nation</u>
<u><i>Coniothyrium atriplicinum</i> Wint.</u> a fungus Det. F.G. Pollack	imperfect	on stems of <u>Atriplex</u> from cargo	Chile	Los Angeles	CA
<u><i>Asphondylia</i> sp.</u> a cecidomyiid midge Det. R.J. Gagne	pupal adult	on <u>Epidendrum</u> plants from baggage	Mexico	Atlanta	GA
<u><i>Ceratitis capitata</i> (Wiedemann)</u> Mediterranean fruit fly Det. W.D. McLellan	larval	in coffee berries from baggage	Costa Rica	New Orleans	LA
<u><i>Chilo phragmitellus</i> (Hübner)</u> a pyralid moth Det. D.M. Weisman	larval	in reed mats from cargo	West Germany	Houston	CA
<u><i>Liogenys macropelma</i> Bates</u> a scarab Det. R.D. Gordon	adult	in military aircraft	Panama	Charleston	--
<u><i>Nasutitermes</i> sp.</u> a termite Det. W.D. McLellan	larval	in stems of <u>Schomburgkia</u> plants from cargo	Belize	New Orleans	FL
<u><i>Pissodes</i> sp.</u> a weevil Det. D.M. Anderson	pupal	in dunnage	West Germany	Charleston	--
<u><i>Veronicella moreletii</i> Crosse & Fischer</u> a slug Det. D. Riley	adult	on leaves of <u>Chamedorea</u> from cargo	Mexico	Brownsville	TX

SUMMARY OF PEST CONDITIONS IN THE UNITED STATES - 1978

(Continued from page 294)

BENEFICIAL ORGANISMS AND THEIR ENEMIES

DISEASES

SKELETONWEED RUST (*Puccinia chondrillina*) is successfully established on Chondrilla juncea (rush skeletonweed) in Douglas County, OREGON, from releases made in 1977. Additional releases were made in 1978. The rust has also been found at several sites where it was not intentionally released, apparently dispersed on the clothing of personnel working in the area.

INSECTS

An ICHNEUMONID WASP (*Bathyplectes curculionis*) parasitized 8-78% of Hypera postica (alfalfa weevil) larvae from alfalfa from peak season collections (April 17 to May 9) in OKLAHOMA. Statewide average was 36.7%. Late season collections (May 4-19) ranged 66-99% parasitized with a statewide average of 88.3%.

In KENTUCKY this wasp emerged from 56 of 57 samples of alfalfa weevil larvae covering 45 counties between April 13 and May 23. Parasitism averaged 7.2% (ranged 0.0-29.7%), compared with 13.2% in 1977.

An ICHNEUMONID WASP (*Bathyplectes anurus*) was released against Hypera postica (alfalfa weevil) in FLORIDA in a small alfalfa field at Gainesville, Alachua County, during the spring of 1978. Two weeks later, about 5% of the fully grown weevil larvae collected from the field were parasitized by *B. anurus* and about 15% were parasitized by *Bathyplectes curculionis*, a species now widely distributed in the United States but not previously reported from Florida.

B. anurus in KENTUCKY emerged from 14 of 57 samples of alfalfa weevil larvae collected from 45 counties between April 13 and May 23. Parasitism averaged 1.7% (ranged 0.2-8.7) in the 14 positive samples.

Releases of ICHNEUMONID WASPS (*Diaparsis* spp.), parasites of Oulema melanopus (cereal leaf beetle), throughout central KENTUCKY totaled 1,900+ in 44 sites in 21 counties.

Releases of an ICHNEUMONID WASP (*Lemophagus curtus*), parasite of Oulema melanopus (cereal leaf beetle), throughout central KENTUCKY totaled 1,300+ at 37 sites covering 20 counties. Releases in PENNSYLVANIA were made at 75 locations in a total of 25 counties.

Almost 300 adults of an ICHNEUMONID WASP (*Lathrolestes minutus*) were released on July 11 in Luzerne County, PENNSYLVANIA, against Fenusia pusilla (birch leafminer).

Releases of a MYMARID WASP (*Anaphes flavipes*), egg parasite of Oulema melanopus (cereal leaf beetle), throughout central KENTUCKY totaled 98,000 over 18 sites in 12 counties.

Releases of a EULOPHID WASP (Tetrastichus julis), parasite of Oulema melanopus (cereal leaf beetle), throughout central KENTUCKY totaled 19,000+ at 44 sites in 21 counties.

Parasitism by an APHIDIID WASP (Lysiphlebus testaceipes) of Schizaphis graminum (greenbug) in wheat in OKLAHOMA occurred from late March through mid-May. Parasitism had reached 20% in some parts of the west-central area by mid-April and ranged 50-90% in many parts of the southwestern, west-central, and northwestern counties by the end of April. Parasitism of greenbug on sorghum occurred in the panhandle counties during August with counts ranging 20-70% by the end of the month.

A PLATYGASTERID WASP (Amitus hesperidum) and a EULOPHID WASP (Prospaltella opulenta) were released against Aleurocanthus woglumi (citrus blackfly) in the Ft. Lauderdale area, Broward County, FLORIDA, in the spring of 1976. The platygasterid wasp built up rapidly at all release sites and was intensively released throughout the infested area. By the fall of 1978, populations of citrus blackfly in Broward County had been reduced to about 2% of that present in the fall of 1977 due to activity of these parasitoids. At the present light host population level, the euplid wasp is becoming the dominant parasitoid. The sharp decrease of the citrus blackfly population has greatly reduced danger of spread to areas outside the regulated zone and facilitated regulatory efforts directed toward eradication of the pest from Florida.

About 44,000 adults of a BRACONID WASP (Apanteles liparis) were released against Lymantria dispar (gypsy moth) larvae in PENNSYLVANIA, May 3-15, 1978, in Dauphin, Lancaster, Perry, and Snyder Counties.

ALFALFA LEAFCUTTING BEE (Megachile rotundata) populations in IDAHO generally decreased an average of 40%. Ascospaera probably proliperda (a chalkbrood) infected up to 80% (averaged about 40%). Damage is more general than in past years when older nesting materials were primarily producing the infected bees.

Alfalfa leafcutting bee stocks in WASHINGTON in 1977 re-drilled boards or in new boards were 25-35% infected with Ascospaera sp. (a chalkbrood) at the start of the season, with little change going into the winter. Pollination of seed alfalfa was generally poor due to inclement weather and fewer healthy bees.

ALKALI BEE (Nomia melanderi) females actively nested in Walla Walla County, WASHINGTON, for only 4 weeks due to heavy rains in early July. Populations in the area were reduced by about 20% by microbial spoilage of cell contents.

The percentage ratios of a LADY BEETLE (Coleomegilla maculata), CONVERGENT LADY BEETLE (Hippodamia convergens), THIRTEENSPOTTED LADY BEETLE (Hippodamia tredecimpunctata tibialis), and Cycloneda sanguinea as indicated by sticky trap collections in a Tippecanoe County, INDIANA, corn field were 69:6:16:9; in 1977 the ratios were 27:65:3:5. Populations increased threefold over levels in 1978 in this field and in corn fields statewide.

Both larvae and adults of H. convergens in OKLAHOMA were common in field crops in many areas from mid-April through mid-November. Numbers ranging up to 90 per 10 sweeps virtually wiped out a Theroaphis maculata (spotted alfalfa aphid) infestation on alfalfa in Stephens County in early May.

About 1,200 adults of a LADY BEETLE (*Coccinella septempunctata*) were released in FLORIDA against Acyrthosiphon pisum (pea aphid), Theroaphis maculata (spotted alfalfa aphid), and other aphids in a small alfalfa field at Gainesville, Alachua County, on March 31. Reproduction was observed in the field and adults were observed as late as July 5 when 11 larvae were seen feeding on Myzus persicae (green peach aphid) infesting a tobacco plant in a nearby garden. Adults were collected up to 0.33 mile from the release site.

About 43,000 adults of a CHRYSOMELID BEETLE (*Longitarsus jacobaeae*) were collected from established OREGON sites in 1978 and released at 78 new sites in 15 western counties. A partial survey showed a high percentage of establishment at sites where releases had been made before 1978.

KLAMATHWEED BEETLE (*Chrysolina quadrigemina*) effectively controlled Hypericum perforatum (St. Johnswort) in all areas of IDAHO.

Adults a WEEVIL (*Rhinocyllus conicus*) in KENTUCKY during late May were heavy and laying eggs on the early seed heads of Carduus nutans (musk thistle) at the 1975 Fayette County release site. Although early blooms were heavily infested, later heads suffered very little damage. Due to the rapidly expanding housing development near the original release site, an attempt was made to broaden the weevil distribution by releases in Logan and Barren Counties. This weevil was again released in INDIANA to aid in the control of musk thistle in Switzerland and Johnson Counties.

About 1,490,000 larvae of CINNABAR MOTH (*Tyria jacobaeae*) were collected and redistributed to western OREGON sites infested with Senecio jacobaea (tansy ragwort). Heavy adult flights in WASHINGTON were seen on several sites in Pierce County. Larvae appeared well established and causing heavy damage to tansy ragwort.

Almost 20,000 adults of a TACHINID FLY (*Exorista japonica*) and about 5,000 adults of a TACHINID FLY (*Blondelia nigripes*) were released against Lymantria dispar (gypsy moth) in PENNSYLVANIA in late May and early June in Dauphin, Lancaster, Perry, and Snyder Counties.

A CECIDOMYIID MIDGE (*Cystiphora schmidti*) apparently was not able to overwinter in OREGON at sites established in 1977. A new release was made in 1978, but populations remained light.

An ERIOPHYID MITE (*Eriophyes chondrillae*) did not overwinter in OREGON from 1977 releases, but new releases were made at 33 sites in 1978 with successful establishment occurring at 32 of the sites.

FEDERAL AND STATE PROGRAMS

HIGHLIGHTS

GRASSHOPPER damage to field margins of crops was widespread in Oklahoma during summer. In Nebraska, lush roadsides and cropland borders combined with roadside and individual treatment kept grasshopper damage below original estimates. Still heavier populations are expected in this State in 1979. GYPSY MOTH populations dropped sharply due to beneficial organisms in eastern Pennsylvania and southern New Hampshire.

DISEASES

Cool weather in KANSAS during April and early May delayed normal growth and maturation of wheat and favored infections of WHEAT STEM RUST (Puccinia graminis f.sp. tritici). Although prevalence was greater in 1978 than in 1977, loss from this disease was estimated as trace. Infections were most prevalent in the central, east-central, west-central, and northwest districts.

INSECTS

CEREAL LEAF BEETLE (Oulema melanopus) in TENNESSEE was found for the first time on oats in Robertson, Smith, and Trousdale Counties. Infestations were also found in Campbell, Clay, Cumberland, Fentress, Jackson, Macon, Morgan, Overton, Pickett, Putnam, Sumner, and Wilson Counties. Damaging populations were found in some fields in Jackson, Overton, and Pickett Counties. Egg and larval parasites were released in the damaged fields. Surveys in NORTH CAROLINA revealed a distribution expansion from 19 to 26 counties. Infestations occurred from Pasquotank County in the east to Ashe and Caldwell Counties in the west and southward to Randolph and Johnston Counties. No economic damage was noted.

Cereal leaf beetle larvae in VIRGINIA had hatched in Richmond County by May 26 and were abundant on spring-planted oats. Larvae from Hanover County indicated hatch over a large area of the Coastal Plain. Parasites were released in 41 counties by June 2. The parasite complex included Tetrastichus julis (a eulophid wasp) and Diaparsis sp. and Lemophagus curtus (ichneumonid wasps). On June 9, cereal leaf beetle damage was widespread on barley in Nottoway County. The grain heads were not filling properly, and the plants were being harvested for silage. In Franklin County, damage to 4.0 ha (10 acres) of spring oats was reported.

Cereal leaf beetle populations in MARYLAND were equal to 1977 levels with economic infestations on small grains in the western and central counties limited mainly to oats (10% or 1,214 ha (3,000 acres) were treated). Parasitized larvae were released for the first time on June 6 in 11 counties. Twelve hundred beetle larvae, parasitized in the following proportions, were released in each field: 40% by Tetrastichus julis (a eulophid wasp), 28% by Diaparsis n.sp. (an ichneumonid wasp), and 16% by Lemophagus curtus (an ichneumonid wasp). The release fields (mostly oats) were in Allegany, Washington, Frederick, Montgomery, Carroll, Baltimore, Harford, Prince Georges, Charles, Howard, and Queen Annes Counties.

An oat field previously infested by cereal leaf beetle at Concord, Merrimack County, NEW HAMPSHIRE, was surveyed in June and July, but no larvae or evidence of feeding damage was found. Larvae taken from an oat field at Milford, Hillsborough County, for a new county record (See CPPR 3(44-47):619) represented the second known site for the beetle in the State. The larvae were parasitized by Tetrastichus julis (a eulophid wasp).

Cereal leaf beetle adults and early larvae were detected in early June in central NEW YORK. Activity was minimal statewide. In general, populations were below infestation levels considered adequate for establishment of additional parasite populations.

GRASS BUGS (Labops spp.) in NEW MEXICO caused treatments to be applied to 11,331 ha (28,000 acres) of Federal grasslands for control in Rio Arriba County.

A late cold spring delayed GRASSHOPPER hatch in WASHINGTON for about 4 weeks. Nymphs first emerged at Okanogan, Okanogan County, June 1. Alternating cool, warm periods and rain, prolonged hatch through the season. MIGRATORY GRASSHOPPER (Melanoplus sanguinipes) constituted 75% of the samples. Infestations of 8 or more grasshoppers per 0.8 sq m (sq yd) were recorded on 16,815 ha (41,550 acres) of State and Federal land, half of which was in Klickitat County. Heavy populations were observed in mid-September to late October in Okanogan and Klickitat Counties and the Snake River drainage.

Rangeland grasshoppers, mostly M. sanguinipes, began hatching in the warmer sections of eastern OREGON in late April. Cold rainy weather in May slowed development and apparently killed many young nymphs. Warm weather returned in June and hatch continued well into the summer season, extending the period of nymphal development. Fall weather favored grasshopper survival in maximum numbers through October which prolonged the egg-laying season. Overall, numbers increased substantially east of the Cascades, particularly in the central area. Although populations were heavier, an excess of range grass due to record amounts of rainfall and reduced cattle herds kept grasshoppers away from hay crops, reducing pressure for control. Adult surveys revealed a total of 206,415 ha (510,060 acres) with 8 or more grasshoppers per 0.8 sq m (sq yd) in Grant, Gilliam, Jefferson, Morrow, Umatilla, Wallowa, Wasco, and Wheeler Counties. An additional 271,917 ha (671,920 acres) in these counties have been placed in the threatening category.

Heavy numbers of CLEARWINGED GRASSHOPPER (Camnula pellucida) infested Silver Lake Basin, Lake County, Oregon, in June. A total of 4,249 ha (10,500 acres) of privately owned winter pasture was treated on June 27-28 by air. An estimated 10% of the population had reached the adult stage at this time. Heavy rainfall immediately following application was apparently responsible for a poor kill, estimated at 60-70%. The remaining grasshoppers caused severe damage in many sections of the lake bottom, causing the ranchers to apply another treatment later in the year. Enough eggs had probably been laid by the time of the second application so that the potential for a severe problem in 1979 exists.

Grasshoppers, mainly M. sanguinipes and C. pellucida, were not serious pests in IDAHO due to the abundant grass from the above normal spring moisture. The populations that did cause serious problems were near Boise where they migrated into residential areas. About 10,000 ha (25,000 acres) were sprayed in the Boise River drainage to preserve big game range. Areas with 8 or more grasshoppers per 0.8 sq m (sq yd) during the fall survey were located in Boundary, Nez Perce, Washington, Custer, Gem, Boise, Ada, Elmore, Blaine, Owyhee, Twin Falls, Camas, Oneida, Power, Minidoka, Lincoln, Bonneville, Madison, and Birmingham Counties.

A total of 9,530.0 ha (23,549 acres) of rangeland was treated for grasshoppers in NEW MEXICO during June in a cooperative control program in Union County. Heavy populations of mainly Melanoplus spp. in alfalfa caused extensive damage at Ft. Sumner, De Baca County, during late summer. The majority of fields in the irrigated valley were treated. The fall adult survey indicated 870,077.1 ha (2,150,000 acres) of State and private lands and 343,984 ha (850,000 acres) of Federal lands had economic infestations.

Grasshoppers began hatching in southwestern and west-central OKLAHOMA the last of March. Nymphs in late May ranged 10-25 per 0.8 sq m (sq yd) on rangeland in scattered areas in several northwestern and west-central counties. By mid-June heavy numbers infested some areas in the southwestern and panhandle counties. From July to September, counts of 10-40 per 0.8 sq m were reported from many

counties in all but the north-central and northeastern areas in rangeland, pastures, and roadsides. Adult surveys during August showed about 653,600 ha (1,615,000 acres) of rangeland in 31 counties economically infested. Dominant species in 1 or more areas included BIGHEADED GRASSHOPPER (Aulocara ellioti), Ageneotettix deorum, Drepanoptera femoratum, Syrbula admirabilis, Phlibostroma quadrimaculatum, Metator pardalinus, Boopeden nubitum, Cordillacris crenulata, TWOSTRIPED GRASSHOPPER (Melanoplus bivittatus), PACKARD GRASSHOPPER (Melanoplus packardii), Melanoplus occidentalis, DIFFERENTIAL GRASSHOPPER (Melanoplus differentialis), Melanoplus lakinus, Melanoplus sanguinipes, and Memoria maculipennis.

Grasshopper damage to field crops was widespread in Oklahoma. Alfalfa was most commonly damaged (in the margins or over entire fields). Counts of 30-50 per 0.8 sq m were present in Texas County by the first week of June. Heavy numbers of small nymphs of Melanoplus sanguinipes were preventing regrowth in Texas and Cimarron Counties in early August. Other crops damaged (mostly in the margins) were soybeans, mung beans, cowpeas, corn, popcorn, forage and grain sorghums, peanuts, and cotton. Crop margins had to be treated in many areas of the State. M. differentialis, M. bivittatus, and in some areas M. sanguinipes were the most common species. Damage to newly planted small grains was expected but was only reported in a few isolated instances. Very dry weather in most areas caused small grain plantings to be somewhat later than usual and many grasshoppers were gone before small grains emerged.

Moderate to heavy grasshopper damage to gardens was reported by mid-June in Oklahoma. Damage was reported in at least 23 counties in virtually all areas. Peach and apricot trees were damaged in some areas by feeding on the leaves and even on the ripening fruit. Damage to lawns was reported in the northwestern quarter of the State.

A grasshopper egg survey in NEBRASKA in the north and northwest districts during the first week of May revealed heavy numbers of eggs (eyespot stage), confirming the results of the fall 1977 surveys. Hatch occurred in the southeast district by May 17. Nymphs ranged up to 30 per 0.8 sq m (sq yd) on rangeland in Morrill, Scotts Bluff, and Sioux Counties on June 7. Dominant species were A. deorum, Aulocara ellioti, Trachyrhachys kiowa, and Amphitornus coloradus. Cropland borders in Keith County ranged up to 50 nymphs per 0.8 sq m on June 28. Dominant species were M. sanguinipes, M. bivittatus, and Phoetaliotes nebrascensis. Some M. bivittatus adults were present. Rangeland in Keith County averaged 15 nymphs per 0.8 sq m.

Grasshopper damage to range and cropland in Nebraska was reported throughout the northwest district and in scattered areas in the north, central, and southwest districts from June 28 through August 3. On June 28, nymphs in the northwest district averaged 20-30 per 0.8 sq m on rangeland and 40-50 on cropland borders. Dominant species were M. differentialis and M. bivittatus. Grasshoppers were holding back alfalfa regrowth in Sheridan, Dawes, Sioux, Deuel, and Garden Counties. By July 6, mostly 4th instar nymphs in Keith and Lincoln Counties averaged 15 per 0.8 sq m on rangeland, 50+ in weedy borders of corn fields, and 15 in alfalfa fields. By then the first damage to range and cropland in the northeast district was reported along and east of the Niobrara River. A corn field in Cedar County had 50+ nymphs per 0.8 sq m in the borders and leaf damage was apparent. On July 6, grasshoppers in the northwest district were moving into alfalfa, field beans, sugar beets, and corn. By July 11 in the southwestern area, infestations were severe in pastures, alfalfa, roadsides, and cropland borders in 12 counties. Surveys from July 10 to 12 in the

east-central and south-central areas indicated that infestations were highly variable in severity and scattered in location. While potentially damaging populations were present in some cropland borders, little, if any, movement into crops occurred. There were scattered economic infestations in rangeland in the east-central area. By July 24 most species had become adults. Damage to gardens was moderate to severe in all districts by this date.

Favorable weather in Nebraska in July and August enabled the roadsides and cropland border areas to remain relatively lush. This situation coupled with an extensive roadside spray program and farmer applications tended to keep grasshoppers in these border areas and reduced their movement into cropland, thus keeping damage below some of the original estimates.

The 1978 fall grasshopper survey showed large areas of Nebraska with heavy number of grasshoppers. The infested areas correspond generally to the problem areas indicated in 1977's survey, but grasshopper numbers are heavier than in 1977. Barring weather unfavorable for grasshopper survival, even heavier populations are expected in 1979. More than 400,000 ha (1 million acres) of rangeland could be included in the cooperative rangeland spray program in 1979.

The grasshopper adult cropland survey in NORTH DAKOTA was conducted with a total of 383 stops in 18 counties in all except the northwest and northeast districts. Populations increased in the east-central, south-central, and southeast districts and decreased in the other surveyed districts. A late spring was forecasted. Planting of small grains was not evident statewide until the second week of May. At this time, topsoil moisture was at a surplus in 10% of the counties with adequate to plentiful moisture in 90% of the counties.

Occasional grasshopper hatch occurred in North Dakota during May 15-19 with 1st instar nymphs in roadside ditches in the west-central district. By May 26, 1st through 3rd instar nymphs were present in alfalfa in the southeast district. Very light damage (throughout eastern North Dakota) started to show on sunflowers in the northeast district May 29 to June 2, with moderate to heavy damage on cropland (sunflowers) in the east-central district and light damage in the southeast district by June 9. By June 23, populations were moving into small grains in the southwest district. As of July 7, populations of 10-36 per sq m (8-30 per sq yd) caused occasional damage (localized "hotspots") to small grains in the east-central district. By July 14, populations up to 30 per 0.8 sq m (sq yd) were evident on alfalfa in the south-central district. Adult cropland survey for 1978 showed economic infestations (8 or more per 0.8 sq m) in Grant, Kidder, McHenry, Morton, Richland, Sargent, and Slope Counties. Dominant species on cropland included M. bivittatus, M. differentialis, and M. packardii.

On rangeland in North Dakota, newly hatched Cannula pellucida nymphs at 130 per 0.8 sq m were found in the west-central district during June 5-9. As of June 16, populations up to 2 per 0.8 sq m occurred in the southwest and west-central districts. By June 23, populations up to 60 per sq m (50 per sq yd) damaged newly seeded alfalfa adjoining crested wheatgrass and bromegrass pasture on rangeland in the southeast district. Economic infestations on rangeland areas were found in Billings, Golden Valley, Morton, and Slope Counties and totaled 14,973.90 ha (37,000 acres). Dominant species were Ageneotettix deorum, Amphitornus coloradus, Aulocara elliotti, C. pellucida, M. sanguinipes, and T. kiowa.

Grasshopper outbreaks did not occur in North Dakota, possibly due to a late spring, above normal rains during the growing season, abundant parasites, predators, and insect diseases, and spray control programs in past years.

Grasshoppers remained noneconomic statewide in MINNESOTA except for some "hot-spots." One wheat field in northern Wilkin County had 6-8 per sq m (1 sq yd) by July 21; these were mostly *M. bivittatus*. About 1,000 ha (2,000 acres) of small grains were treated at an estimated cost of \$17,500. Economic levels in this county were found on field margins and on roadsides adjacent to alfalfa by August 4. REDLEGGED GRASSHOPPER (*Melanoplus femur-rubrum*) ranged 8-16 per sq m and *M. bivittatus* exceeded the economic level of 10 per sq m (1 sq yd) in some field margins and roadsides. Adult surveys during August 14-25 in 62 counties and 322 alfalfa or clover fields revealed averages of 1.12 adults per sq m in fields and 2.70 in field margins. Dominant species were *M. femur-rubrum* 79%, *M. bivittatus* 14%, *M. differentialis* 4%, and with *M. sanguinipes*, CAROLINA GRASSHOPPER (*Dissosteira carolina*), and *Mermiria* sp. together 3%. Egg surveys in 8 counties and 15 fields in the northwest, west-central, and southwest districts revealed averages of 0.0108 egg pod per sq m in field and 0.0012 in field margins. Populations are expected to be light to economic in 1979, but Big Stone, Traverse, and Wilkin Counties will need surveillance.

Twenty-three GYPSY MOTH (*Lymantria dispar*) adults in WASHINGTON were caught in pheromone traps in the Seattle and Renton area, King County. Thirty-three egg masses were found at Renton; 4 were caged for observation of timing of egg hatch and the remainder were destroyed. An eradication program is scheduled for this spring.

Surveillance for gypsy moth in MINNESOTA was continued during the 1978 season. A total of 10,616 traps was set in 65 counties of the State compared with 8,898 traps in 54 counties in 1977. One adult male was trapped by M. Miller at Mantorville, Dodge County, on August 25, 1978. The trapped specimen was identified and determined by R.S. Taylor as the gypsy moth. Many gypsy moth adult males were collected in NORTH CAROLINA during late summer in a mountainous area of Avery County indicating that an infestation is likely. No further evidence has been uncovered supporting an active infestation in the area.

Gypsy moth egg hatch began in southern PENNSYLVANIA the last week in April, and in central counties the second week in May. By the last week in May, larvae had reached the 3rd instar stage in central counties. Pupation began the last week in June in central counties, and was 60% complete by that time in southern counties. The presence of male adults in late October in Clinton County may have indicated that a second generation occurred.

Gypsy moth populations collapsed in eastern Pennsylvania. Aerial surveys revealed defoliation on 18,328.0 ha (452,892 acres) in 23 counties the summer of 1978, compared with 52,609.31 ha (1.3 million acres) in 28 counties in 1977. This collapse has been attributed largely to parasites, in particular the larval parasite *Parasetigena silvestris* (a tachinid fly). All established gypsy moth parasites increased significantly in 1978. In collapsed areas, total parasitism rate exceeded 95%, making the biological collapse as effective as spraying. Aerial application of insecticide in the Federal-State County cooperative program began May 19 and was completed June 14. In all, 5,873.2 ha (14,513 acres) were sprayed for gypsy moth control.

Gypsy moth males were trapped in most areas of DELAWARE. Eggs hatched in northern New Castle County during late April. Very few heavy infestations were reported.

Gypsy moth larvae in NEW HAMPSHIRE began hatching on May 9 from egg masses held at Durham, Strafford County. Hatching began simultaneously at the Canterbury infestation site, Merrimack County, following a prolonged warm, dry period and a short, warm moist period in May. Foliar feeding began during the second week of May. Defoliation became noticeable by June 4 and the infestation had approximately doubled in size (to about 200 ha (400 acres)), moving south and east of the original site. A disease appeared in the larvae of the main infestation site by June 12. Defoliation approached 100% by June 18. By the end of June, this disease had killed all larvae in the central 80.9-ha (200-acre) infestation, leaving only residual scattered concentrations of larvae around the periphery. By July 5, only 2 viable pupae were found in the site and 30-40% of larvae in the periphery also were dying of the disease. Little defoliation is expected at the site in 1979 due to this disease.

Two new gypsy moth sites were discovered in New Hampshire in 1978: One was at Conway, Carroll County, and the other was at New Durham, Strafford County. The Conway site was surveyed in September. Trees within a 20 to 40.5-ha (50 to 100-acre) site near a ridge top averaged 10-15 egg masses per tree. Some defoliation is expected here in 1979.

Heavy JAPANESE BEETLE (Popillia japonica) populations began emerging in TENNESSEE during the week ending June 9. Infestations and damage were as heavy as in previous years. A biological control agent Bacillus popilliae (milky disease A) was applied for larval control in a pilot project in Blount County. Japanese beetle in KENTUCKY caused minor damage to corn. Damage was restricted to field borders. Populations normally reached heaviest levels in a particular field after corn in that field had pollinated. Less than 1% of the State's corn acreage was treated for Japanese beetle during 1978.

The first Japanese beetle adult in INDIANA was observed in Allen County, June 28. Populations were much heavier than in 1977, causing some concern among soybean growers in the northern districts but probably were not economic in this crop. Adults began emerging throughout OHIO by June 26. Populations were severe in central and southern Ohio until September. Light populations were found in the northwestern area.

The first Japanese beetle adult of the season in VIRGINIA was collected feeding on leaves in a greenhouse on April 6 in the Virginia Beach area. Adults were later observed on May 23 in the Independent City of Virginia Beach, on June 13 in Chesapeake, and on June 18 in Amelia County. In Montgomery County, infestations appeared lighter than in past years. By July 21, numbers continued to be moderate in Montgomery County although damage was light; by July 31, adults had appeared in heavy numbers. Populations were reported heavy in the Independent City of Nansemond.

Japanese beetle adult emergence in PENNSYLVANIA began in early July, peaked in mid-August, and did not decrease until the first week in September. Populations in the central counties were heavier than in 1977. All Erie County grape vineyards showed infestations. Leaf damage estimates ranged from 0.4 to 6.9%.

Japanese beetle was very heavy in southern NEW HAMPSHIRE in 1978, continuing a trend begun several years ago. The first adults were collected in Concord, Merrimack County, on June 28 and adults remained abundant on ornamentals throughout July and August. Adults remained common until mid-September, due to warm, dry weather.

Second and third instar nymphs of MORMON CRICKET (Anabrus simplex) were observed in the lower Imnaha River Canyon of Wallowa County, OREGON, in late April. Subeconomic numbers were seen at nearby Cherry Creek and in the Wallowa Mountains, east of Cove, Union County. In IDAHO, small bands or subeconomic numbers were scattered in the Boise and Payette River drainage. A small population near the Oneida and Power County line may pose some problems in 1979.

PINK BOLLWORM (Pectinophora gossypiella) in ARIZONA infested 0-15% of the cotton bolls in most fields. A few fields had 20% of the bolls infested, but applications of pesticide brought the counts down. Much less damage occurred in 1978 than in past years.

RANGE CATERPILLAR (Hemileuca oliviae) was treated in NEW MEXICO on about 490,000 ha (1.2 million acres) of rangeland in Colfax, Union, Harding, and Mora Counties, July 3-21. Fall egg cluster survey verified effectiveness of summer spray program, but indicated potential economic infestations in 1979 on about 400,000 ha (1 million acres) in the northeastern counties. Egg cluster surveys will be conducted in the south-central area in spring 1979.

Range caterpillar hatch in OKLAHOMA began about May 10 on rangeland in Cimarron County. Larval surveys in mid-June showed economic infestations (2-18 per 0.8 sq m (sq yd)) in 32 sections in the southwestern part of the county and light infestations in an additional 148 sections. Surveys of the heavily infested area in late July showed fully grown larvae common at 5-15 per 0.8 sq m and scattered spots with 30-45 per 0.8 sq m. Adults emerged mostly during the first half of October.

During 1978, a total of 7,230 confirmed cases of SCREWWORM (Cochliomyia hominivorax) was reported in the continental United States as follows: Texas 1,236, New Mexico 1,422, Colorado 4, Arizona 4,361 (1 case was collected on October 22, 1977, but identified in 1978), Nevada 1, and California 189. This grand total is a sharp increase from the 467 confirmed cases in 1977. Almost 44,000 cases were reported in Mexico. Sterile screwworm fly releases in the U.S. totaled more than 5 billion over the southwestern area in 1978. Almost 8 billion sterile flies were released within the eradication zone in Mexico. 1/

1/ Contributed by J.L. Hourigan, Veterinary Services, Hyattsville, Maryland.

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METRIC CONVERSION

1 cm = 0.393701 in
1 m = 3.28084 ft = 1.09361 yd
1 km = 0.621371 mi
1 sq cm = 0.155000 sq in
1 sq m = 10.7639 sq ft = 1.19599 sq yd
1 ha = 2.47104 acres
1 sq km = 0.386101 sq mi
1 kg = 2.20462 lb
1 t (metric ton) = 1.10231 short ton
1 kg/ha = 0.892183 lb/acre
1 t/ha = 0.446091 ton/acre

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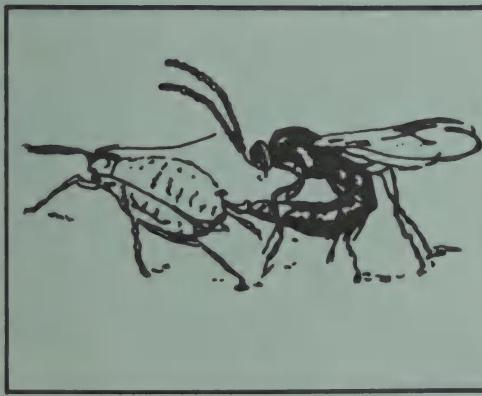
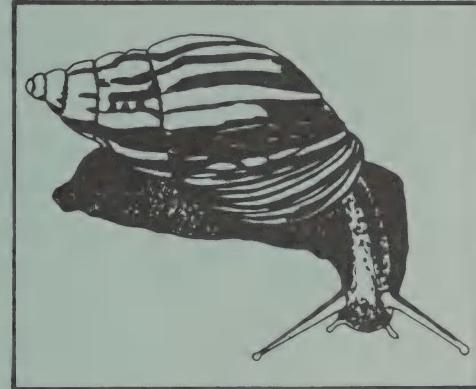
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U.S. DEPARTMENT OF AGRICULTURE
ANNUAL PEST RECORDS



This publication is distributed weekly to Federal and State agencies, universities, farmers, and others interested in containing or controlling pests in the United States.

Data included in this publication are compiled from reports submitted by cooperating State, Federal and other agricultural and industrial specialists. Accuracy of the reports is not verified prior to publication.

Cooperative Plant Pest Report supersedes *Cooperative Economic Insect Report*, which was discontinued with Volume 25, Numbers 49-52, 1975.

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COOPERATIVE PLANT PEST REPORT**HIGHLIGHTS**Current Conditions

BLACK CUTWORM cut 3% of corn in parts of Kansas and Illinois. (p. 329-330).

ARMYWORM heavy on corn in west-central area of South Carolina. (p. 330).

ALFALFA WEEVIL heavy on alfalfa in parts of New Mexico, Kansas, Wisconsin, and Ohio. (p. 334-335).

BLUE MOLD on tobacco in northeastern area of Florida. (p. 337).

TOBACCO BUDWORM problem on tobacco in Coastal Plains of North Carolina. (p. 337).

COLORADO POTATO BEETLE early in Virginia. (p. 338).

CEREAL LEAF BEETLE damage in parts of Indiana, Ohio, and Virginia. (p. 343).

GRASSHOPPERS heavy in parts of California, New Mexico, and Kansas. (p. 339).

Prediction

SPRING CANKERWORM outbreak expected in Ohio. (p. 339).

Detection

● A RICEGRASS in California is new for North America. (p. 345).

For new county and independent city records see page 345.

Some First Occurrences of the Season

EUROPEAN CORN BORER adults in Kansas, Ohio, and New York; eggs in Missouri. GREENBUG and YELLOW SUGARCANE APHID on sorghum in Kansas. TAKE-ALL, CRAZY TOP DOWNTY MILDEW, and CHINCH BUG nymphs on wheat in Kansas. POTATO LEAFHOPPER migrants in Wisconsin. ALFALFA PLANT BUG nymphs in Minnesota. TOBACCO HORNWORM larvae in North Carolina. BLACK VINE WEEVIL adult in Idaho. COLORADO POTATO BEETLE in New York. CODLING MOTH adults in Kansas and New York. PLUM CURCULIO adults in New Hampshire. WESTERN CHERRY FRUIT FLY adults in Washington. SAN JOSE SCALE in New York. FACE FLY in North Dakota.

Reports in this issue are for the week ending May 25 unless otherwise indicated.

CONTENTS

Corn, Sorghum, Sugarcane	
Diseases.....	329
Insects.....	329
Small Grains	
Diseases.....	331
Insects.....	332
Turf, Pastures, Rangeland	
Insects.....	333
Forage Legumes	
Diseases.....	333
Insects.....	334
Peanuts	
Insects.....	336
Cotton	
Insects.....	337
Tobacco	
Diseases.....	337
Insects.....	337
Miscellaneous Field Crops	
Insects.....	338
Beneficial Organisms and Their Enemies	
Insects.....	342
Federal and State Programs	
Insects.....	343
Hawaii Pest Report.....	344
Detection.....	345
Corrections.....	345
Light Trap Collections.....	346
Pest Interceptions of Quarantine Significance at Ports of Entry.....	348
Potatoes, Tomatoes, Peppers	
Insects.....	338
Beans and Peas	
Insects.....	338
Cole Crops	
Insects.....	339
General Vegetables	
Insects.....	339
Deciduous Fruits and Nuts	
Diseases.....	339
Insects.....	339
Small Fruits	
Insects.....	340
Forest and Shade Trees	
Diseases.....	341
Insects.....	341
Man and Animals	
Insects.....	341

CORN, SORGHUM, SUGARCANE

DISEASES

STEWART'S WILT (Erwinia stewartii) - See CORN FLEA BEETLE (Chaetocnema pulicaria), page 331.

MAIZE DWARF MOSAIC VIRUS - See GREENBUG (Schizaphis graminum), page 331.

INSECTS

EUROPEAN CORN BORER (Ostrinia nubilalis) - KANSAS - First adults of season. District> County= in blacklight traps week ending May 18: SC> Kiowa= at Havidland and EC> Shawnee= at Rossville (G.A. Salsbury, J.D. Lambley); adults currently: SW> Finney, SC> Kiowa, Pratt, and Sedgwick, SE> Neosho, EC> Shawnee, and NE> Riley= mostly trace (K.O. Bell, Jr.). MISSOURI - First egg mass. Area> status on corn: SW> first egg mass May 22, adults in grassy areas around most fields. (R.E. Munson).

ILLINOIS - District> County= European corn borer status: E> Champaign= 1 adult in blacklight trap at Urbana, May 22; ESE> Clark and Lawrence= many adults on grassy roadsides and alfalfa by May 23; E> Champaign= pupation 68% with no empty pupal cases; NE> Boone= pupation 25% with no empty pupal cases; WSW> Pike= pupation 76% with no empty pupal cases; and SE> Massac= pupation 7% and emergence 93%. District> County= heat unit accumulation (base 50°F) as of May 23: NW> Winnebago= 345 at Rockford; W> Adams= 554 at Quincy; C> Mason= 459 at Kilbourne; and E> Champaign= 449 at Urbana. (K. Black).

INDIANA - District> County= European corn borer pupation on corn: WC> Warren= 5 of 5 larvae pupated in upright cornstalks in 1 field by May 20; NW> White= 3 of 5 larvae pupated in 1 field by May 23. District> County= heat unit accumulation (base 50°F) January 1 to May 24: NW> La Porte= 464 at Wanatah; WC> Tippecanoe= 453 at West Lafayette; NC> St. Joseph= 448 at South Bend; NE> Allen= 483 at Fort Wayne; C> Marion= 552 at Indianapolis; and SW> Vanderburgh= 685 at Evansville. (R.W. Meyer).

WISCONSIN - District> County= European corn borer status on corn: SC> Dane= pupation 36% completed by May 23. First adults expected at 208 degree-days (base 10°C), about May 26-27 at advanced southern sites. Most fields in southern area appear too short to support larvae from early flight. (O.L. Lovett).

OHIO - First European corn borer adults of season. Began flying in several counties. (R.E. Treece). NEW YORK - First of season. District> County= adults: Long Island> Suffolk= in blacklight trap week ending May 5-11. (Semel).

BLACK CUTWORM (Agrotis ipsilon) - KANSAS - District> County= status on corn [host stage] in number of field (f): NE> Pottawatomie= larvae (averaged 1.9 cm long) cut 0-6% of plants [3-4 leaf] in 7f, infestations variable within fields (K.O. Bell, Jr.); EC> Johnson= none to trace [3-4 leaf] in 3f, Shawnee= trace in 1f, Osage and Franklin= none in 2f, Douglas and Franklin= no adults in pheromone traps; and NE> Pottawatomie= adults trapped (S.C. White et al.). MISSOURI Area> status on corn: SW> light, damaged less than 1% of plants in 5 of 10 fields. (R.E. Munson).

IOWA - District> County= 4th instar black cutworm larvae on corn: C> Polk= cut corn in fields. (W.B. Showers). ILLINOIS - Economic in many fields. District> 3rd to 6th larval instars on corn [2-4 leaf]: W, C, and WSW> 2 or more per 100 plants, cut 3% of plants in many fields, cut up to 20% in 1 field. (K. Black). WISCONSIN - District> County= status on corn: SC> Rock= larvae of this species and a NOCTUID MOTH (Euxoa detersa) damaged 1-2% of 5-cm corn [seedling] in 1 field. (O.L. Lovett). OHIO - Area> status: Statewide> adults in light traps (D. Woods et al.) and NE District> Wayne County= 4th to 6th larval instars in several corn fields with less than 1% damage (C. Night).

DINGY CUTWORM (Feltia ducens) - NEBRASKA - District> County= status on corn: SW> Lincoln= larvae of this species and DARKSIDED CUTWORM (Euxoa messoria) caused 75% stand loss to corn [newly emerged] (Andersen, Campbell); E> Hamilton and Saunders, SE> Fillmore, and NE> Antelope= active, no counts available (Peters, Jarvi); NE> Pierce= dingy cutworm and a NOCTUID MOTH (Euxoa detersa) caused 20% stand loss to corn [2 leaf] (Jarvi). IOWA - District> County= status on corn: WC> Calhoun= larvae 2.0-2.5 cm long in fields following soybeans with 5-6% of plants damaged (J.L. Crewell); SW> Adair, Fremont, and Page; and C> Boone and Dallas= larvae fed on leaves and cut some plants on about 50 ha (L.H. Townsend).

ARMYWORM (Pseudaletia unipuncta) - SOUTH CAROLINA - District> County= status on corn and wheat: WC> Newberry= heavy infestation badly damaged about 80 ha near Jalapa. Larvae heavy throughout county. (H.L. Eason, R.P. Griffin).

CORN EARWORM (Heliothis zea) - FLORIDA - District> County= adults per night: C> Alachua= sharply increased beginning May 22 in corn, from 2 to 10 per night in blacklight traps, catches of males in traps baited with females increased from previous 2 to 6 per night. (E.R. Mitchell).

FALL ARMYWORM (Spodoptera frugiperda) - FLORIDA - District> County= adults in corn: C> Alachua= averaged 2 males per night in pheromone traps, populations generally lighter than expected in and around sweet corn at Alachua. (E.R. Mitchell). MISSISSIPPI - Damage noneconomic past 2 weeks. Larvae on field corn in central and southern counties with spotted occurrence in northern counties. District> County= larvae on corn [host height]: EC> Oktibbeha= 2nd to 6th instar [25-46 cm] and Noxubee= 2nd to 3rd instar [10-20 cm]. (R. Anderson).

POTATO STEM BORER (Hydroecia micacea) - NEW YORK - District> County= status May 22: W> Monroe= 1st and 2nd instar larvae, collected from curly dock near corn plantings. (H.R. Willson).

VARIEGATED CUTWORM (Peridroma saucia) - OHIO - Collected in blacklight traps in several counties (D. Woods, R. Schmidt). District> County= status on sweet corn: SE> Washington= 1 larva (1 cm long) collected. (G.P. Walker).

SUGARCANE BEETLE (Eutheola rugiceps) - MISSISSIPPI - District> County= status on corn [seedling]: SE & Coastal> Newton; SC> Simpson, and EC> Chickasaw= caused problems, severe stand reduction in last 2 counties caused replanting. (J. Jarratt). SOUTH CAROLINA - District> County= status on corn: WC> Saluda and Abbeville= damaged plants, about 80% of 12-ha field destroyed at 1 site in latter county. (J.S. Jones, Jr., W.T. Wall). NORTH CAROLINA - District> County= adult status: Southern Piedmont> Lincoln, Cabarrus, Stanly, Anson, and Union= still damaged corn. Replanting occurred in fields up to 8.1 ha (S. Winslow, T. Hunt).

CORN FLEA BEETLE (Chaetocnema pulicaria) - OHIO - District> County= status on sweet and field corn: SE> Washington and Perry= adults caused light damage, vector of STEWART'S WILT (Erwinia stewartii). (G.P. Walker).

GREENBUG (Schizaphis graminum) - KANSAS - First of season on sorghum with numbers heavier than suspected, apparently due to recent flight. District> County= averages per 0.3 row m of sorghum [mostly 3 leaf] in number of fields (f): NE> Jefferson= 0-1 in 3f, Pottawatomie= 0.1-9 in 2f, and Riley= 0.1 in 1f; EC> Shawnee= 0-5 in 2f and Osage= 0 [1-2 leaf] in 2f (B.D. Hilbert et al.). Counts of this vector of MAIZE DWARF MOSAIC VIRUS in sorghum: NE> Riley and Pottawatomie= trace. (T. Sim, IV).

YELLOW SUGARCANE APHID (Sipha flava) - KANSAS - First of season. District> County= counts on sorghum [3 leaf]: EC> Shawnee= trace. (B.D. Hilbert).

CHINCH BUG (Blissus leucopterus leucopterus) - KANSAS - District> County= averages per plant [host stage] in number of fields (f): NE> Pottawatomie= sharp decrease appeared related to rains over weekend, average of about 10 per corn [3-4 leaf] plant in 1f last period showed no damage by May 23 when over-wintered numbers dropped below 5, average of 3 on sorghum [2-3 leaf] in 1f dropped to 0.7 by May 23 with some plants damaged but none dead, averaged 2.5 per sorghum plant in second field by May 23 with light damage (K.O. Bell, Jr.); Jefferson= trace to 0.3 on sorghum [3-leaf] in 3f; EC> Shawnee= trace on sorghum in 2f (B.D. Hilbert), Osage= 0 to trace on sorghum in 2f, 1 on corn in 1f, Johnson= 0 to trace on corn in 3f, and Franklin= trace on corn in 1f (S.C. White).

SMALL GRAINS

DISEASES

WHEAT LEAF RUST (Puccinia recondita f.sp. tritici) - KANSAS - Distributed from southern border to northern border in central area. Prevalence heaviest in north-central area and found in nearly every field. Extensive on wheat throughout central area. (T. Sim, IV).

<u>District> County</u>	<u>Prevalence (%)</u>	<u>Severity</u>	<u>Host stage</u>
NC> Ottawa	trace to 40	trace	heading to flowering
NC> Cloud	10	trace	heading
NC> Mitchell	5-10	trace	heading to flowering
NC> Jewell	trace to 30	trace	boot
NC> Republic	trace to 30	trace to 5%	heading to flowering
SC> Pratt	trace to 1	trace	flowering
SC> Stafford	trace	trace	flowering
NE> Pottawatomie	trace	trace	heading
NE> Nemaha	trace	trace	heading
SW> Clark	trace	trace	-

LOOSE SMUT (Ustilago nuda) - KANSAS - Became apparent in north-central area as wheat heads emerged. (T. Sim, IV).

<u>District> County</u>	<u>Prevalence (%)</u>	<u>District> County</u>	<u>Prevalence (%)</u>
SW> Clark	trace	EC> Osage	trace
NE> Riley	1	NC> Ottawa	trace
NE> Pottawatomie	1	C> Dickinson	1

CEPHALOSPORIUM STRIPE (*Cephalosporium gramineum*) - KANSAS - Became more evident in north-central area. Prevalence varied on wheat. (T. Sim, IV).

District> County	Prevalence (%)	Severity	Host stage
C> Dickinson	trace	-	boot to heading
NC> Ottawa	trace to 10	light	heading
NC> Mitchell	trace	-	heading
NC> Jewell	trace to 10	light	boot
NC> Republic	trace	-	boot
EC> Osage	trace	-	-
NE> Pottawatomie	trace	-	flowering

TAN SPOT (*Pyrenopthora trichostoma*) - KANSAS - Area> status on wheat: Statewide> still 1 of most prevalent foliar diseases, prevalence varied from field to field. (T. Sim, IV).

SPECKLED LEAF BLOTCH (*Septoria tritici*) - KANSAS - Area> status on wheat: Statewide> still 1 of most prevalent foliar diseases, prevalence varied from field to field. (T. Sim, IV).

TAKE-ALL (*Gaeumannomyces graminis* var. *tritici*) - KANSAS - First of season. District> County= status on wheat: SC> Harvey and C> McPherson= in single fields, stunting varied. (T. Sim, IV).

BARLEY POWDERY MILDEW (*Erysiphe graminis* f.sp. *hordei*) - KANSAS - District> County= prevalence on barley: EC> Johnson= 50% in 1 field. (T. Sim, IV).

CRAZY TOP DOWNTY MILDEW (*Sclerophthora macrospora*) - KANSAS - First of season. District> County= prevalence on wheat: SC> Pratt= trace in 1 field. (T. Sim, IV).

WHEAT STREAK MOSAIC VIRUS - KANSAS - Area> prevalence on wheat: C> scattered in fields in most counties; SC district> Kiowa County= severe on 5.3 ha of 52.6-ha irrigated circle of wheat. (T. Sim, IV).

BARLEY YELLOW DWARF VIRUS - KANSAS - District> County= prevalence on barley: SC> Kingman= trace in 1 field. Several aphid vectors (GREENBUG (*Schizaphis graminum*), an APHID (*Rhopalosiphum padi*), and ENGLISH GRAIN APHID (*Macrosiphum avenae*)) increased in central and eastern area wheat, populations light. (T. Sim, IV).

INSECTS

RICE WATER WEEVIL (*Lissorhoptrus oryzophilus*) - ARKANSAS - District> County= adults on seedling rice: SE> Desha= damage heavy, infested fields not purposely flooded, heavy rains caused water to accumulate, especially along levees (M. Wall) and NE> Jackson= fed on seedling grain sorghum where little rice emerged (G. Barnes).

GREENBUG (*Schizaphis graminum*) - ARKANSAS - Area> counts on wheat: NE> light. (J. Kimbrough). KANSAS - See BARLEY YELLOW DWARF VIRUS above. Greenbug still light on wheat in eastern area. District> County= counts per 0.3 row m of wheat [host stage] in number of fields (f): NE> Riley= averaged 1-2 [headed] in 5f and Pottawatomie= 2 in 1f (K.O. Bell, Jr.); EC> Osage= averaged 0-2 3f and Shawnee= 1 in 1f (S.C. White); SC> Pratt= 0-1 [bloom] in 3f, Barber= 0 to trace [bloom] in 2f, and Stafford= 0.5 [bloom] in 1f (G.A. Salsbury); and SW> Clark= none (M.L. Shuman, D.E. Mock).

AN APHID (*Rhopalosiphum padi*) - KANSAS - District> County= average per 0.3 row m of wheat [bloom]: SC> Barber= 4 in 1 field. (G.A. Salsbury). Also see BARLEY YELLOW DWARF VIRUS, page 332.

ENGLISH GRAIN APHID (*Macrosiphum avenae*) - See BARLEY YELLOW DWARF VIRUS, page 332.

ASTER LEAFHOPPER (*Macrosteles fascifrons*) - WISCONSIN - District> County= adults per 100 sweeps of oats: C> Marquette and SC> Jefferson= never exceeded 2 on oats [10 cm]; EC> Fond du Lac and SC> Columbia= none found. (O.L. Lovett).

CHINCH BUG (*Blissus leucopterus leucopterus*) - KANSAS - First nymphs of season. District> County= status on wheat: EC> Shawnee= nymphs in 1 field May 23, populations averaged 5 per 0.3 m in 1 field in southern area, and Osage= none to trace in 3 fields (S.C. White); and NE> Riley= eggs but no nymphs (T.M. Mize, K.O. Bell, Jr.), overwintered adults generally heavy north of Manhattan and near Riley. Noticeably heavier on thinner, smaller wheat than in thicker, larger wheat possibly due to high soil surface moisture and humidity associated with thick wheat (K.O. Bell, Jr.). NEBRASKA - District> County= adult status on wheat [early boot to heading]: E> Lancaster and SE> Gage= ranged 0-3 (averaged 1.4) per 0.3 row m in 4 fields in southern and northern areas, respectively. (Miller).

TURF, PASTURES, RANGELAND

INSECTS

ARMYWORM (*Pseudaletia unipuncta*) - KANSAS - District> County= larval averages of this species and VARIEGATED CUTWORM (*Peridroma saucia*) per 0.8 sq m of bluegrass turf: EC> Johnson= 1-2 on 1 farm. (K.O. Bell, Jr.). MISSOURI - Area> 2nd to 4th instar larvae per 0.09 sq m of orchardgrass and fescue: SE> light to heavy, from fewer than 1 to 20. (R.E. Munson).

FORAGE LEGUMES

DISEASES

SPRING BLACK STEM (*Phoma medicaginis*) - KANSAS - Still affected rest of first alfalfa growth in most areas. District> County= prevalence: SC> Pratt= 100% in 1 field. Defoliation in every field surveyed. (T. Sim, IV).

<u>District> County</u>	<u>Prevalence (%)</u>	<u>Severity</u>	<u>Host height (cm)</u>
NE> Riley	100	moderate	61
NE> Pottawatomie	100	moderate	56
NC> Cloud	100	moderate	61
NC> Clay	100	moderate	51

WISCONSIN - Developed rapidly in southern area. District> County= status on alfalfa: SC> Columbia= infected leaves on lower half of plant, lower leaflets dead and dropping in 1 field with lush growth. (O.L. Lovett).

ALFALFA DOWNTY MILDEW (*Peronospora trifoliorum*) - KANSAS - Status on first growth of alfalfa in scattered fields. (T. Sim, IV).

District> County	Prevalence (%)	Severity	Host height (cm)
NE> Riley	10	light	61
NC> Clay	trace	-	51
NE> Pottawatomie	trace	-	56

YELLOW LEAF BLOTH (Pseudopeziza jonesii) - KANSAS - District> County= prevalence on alfalfa [61 cm]: NC> Cloud= 40% in 1 field. (T. Sim, IV).

INSECTS

ALFALFA WEEVIL (*Hypera postica*) - OREGON - County= larvae per sweep of alfalfa: Crook= up to 10. (G. Fisher). UTAH - Weevil development slow due to cool spring. Larvae, 1st instar on alfalfa noted May 18. District> County= status on alfalfa [25-36 cm tall]: N> Cache= many 2nd instar larvae in fields where populations light, harvesting to begin in 2 weeks, May 22. Precutting control not required last 3 years. (D.W. Davis, L. Jech).

NEW MEXICO - District> County= alfalfa weevil status on alfalfa: SE> Lea= adults averaged 5-7 per 25 sweeps in Hobbs area (T. Riddle), Eddy= adults 3 or more per 0.09 sq m in northern area, adults severely damaged new growth of recently cut alfalfa, some treatments applied, 50% of pupae parasitized by wasps in test field at Artesia (L. Gholson); and NW> Bernalillo= larvae 225-700+ and adults 7-20 per 25 sweeps in Albuquerque South Valley (C. Heninger), and San Juan= larvae 2-30 per sweep in Farmington area, no adults (G. Nielsen).

KANSAS - First cutting well underway in eastern and southern areas. Possibly some alfalfa weevil problems in some cut fields in western part of south-central area, mostly this pest ate regrowth in and near windrows. District> County= status on alfalfa: SC> Pratt= larvae increased back to 151 per sweep [66 cm] in 1 field treated on April 26, many first generation adults, Barber= lacing of terminals serious in 2 fields (G.A. Salisbury); NE> Riley= populations leveling off in 1 uncut field with little damage noticeable and first generation adults present (K.O. Bell, Jr.), and Atchison= larvae 18 per sweep, first generation adults trace, and 5 cm of terminal lacing [61 cm tall] in 1 uncut field (B.D. Hilbert).

NEBRASKA - District> County= alfalfa weevil larvae and adults per 100 sweeps of alfalfa [25-61 cm (averaged 38 cm) tall]: SE> Otoe= 0 and 0 in 23 fields and 40 and 0 in 1 field and C> Dawson= ranged 0-97 (averaged 20.5) and 0-21 (averaged 6.7) in 24 fields. (Seavers). MISSOURI - Area> adults per 10 sweeps of alfalfa: SW> 4-16. (R.E. Munson). IOWA - District> County= status on alfalfa: SC> Clarke and SE> Davis= damage light. (J.R. DeWitt). ILLINOIS - Area> status on alfalfa: As far north as State Highway 136> damage sporadic although many fields escaped damage or cut to avoid damage. District> County= heat unit accumulation (base 48°F) as of May 23: NW> Winnebago= 405 at Rockford; W> Adams= 648 at Quincy; C> Mason= 537 at Kilbourne, and E> Champaign= 531 at Urbana. (K. Black).

WISCONSIN - Alfalfa weevil larval damage reached economic threshold in few southern fields. District> County= status on alfalfa: SC> Dane, Rock, Green, Columbia, and Jefferson, SW> Sauk, Iowa, and Grant, SE> Waukesha, WC> La Crosse, and C> Waushara= "shothole" damage in tips evident in some fields,

alfalfa weevil tip damage up to 60% in southern Green, 50% in Columbia, 15% in Waukesha, 40% in Dane, 3% in Waushara, 10% in La Crosse and 10% in WC> Trempealeau County, egg clusters in many of above counties indicate hatch far from complete, adults appeared to slow down; EC> Sheboygan and Fond du Lac, NE> Oconto, SE> Washington, and SC> Dodge= development somewhat delayed but hatch just started and potential good for damaging populations, egg clusters up to 9 per 20 alfalfa stems in Fond du Lac County field and slightly lighter in Sheboygan County field. District> County= degree-day accumulation (base 8.9°C): SC> Dane= 188.9 at Madison; SE> Washington= 170.6 at Hartford; EC> Outagamie= 130.0 at Appleton; WC> Dunn= 145.6 at Menomonie; and C> Waushara= 179.4 at Hancock. (O.L. Lovett).

INDIANA - Area> alfalfa weevil status on alfalfa: WC> excellent crop growth plus budding [9-40% in bud] combined to reduce appearance of damage or to make harvesting viable alternative where untreated; NW district up to U.S. Highway 30> damage minor; north of U.S. Highway 30> treatments may be necessary, growth slightly above 40 cm; and south of U.S. Highway 30> 60+ cm in WC district and 50 to nearly 60 cm in NW district. (R.W. Meyer).

OHIO - Alfalfa weevil damage heavy in many alfalfa fields. District> County= status on alfalfa: C> Franklin, Fairfield, and Marion, and SC> Adams= tip damage 100% in some fields, damage in Marion County in first-year field while nearby 4-year-old field had visibly less damage, damage in Adams County in second-year field with nearby 5-year-old field less affected (T. White), Franklin= pupae collected (D.H. Horn), Fairfield= 1 newly emerged adult collected indicated some adults in central and southern areas are second generation and in reproductive diapause. Counts in alfalfa May 19-22 (G.P. Walker et al.):

District> County	Larvae per sweep	Adults per sweep	Host height (cm)
C> Franklin	125	-	-
C> Fairfield	17	0.35	58
C> Fairfield	270	0.10	56
NC> Ashland	2	0.10	33

FLORIDA - Second generation alfalfa weevil larvae appeared. District> County= larvae and adults per 30 sweeps of alfalfa in 1 field: C> Alachua= 78 and 35 on alfalfa [blooming] at Gainesville, May 15 (M.B. Adar), about 140 and 46, May 18 (F.W. Mead), and 24 and 14, May 22 (M.B. Adar).

VARIEGATED CUTWORM (*Peridroma saucia*) - KANSAS - District> County= larvae per 0.09 sq m of alfalfa [host height]: SE> Montgomery, Chautauqua (H.L. Brooks), Cowley, Butler, and SC> Stafford (R.J. Bauernfeind)= retarded regrowth, Stafford= larvae, 6.4-13 mm long, averaged 1 in cut field and 3-4 [71 cm] and Pratt= averaged 2 [71 cm] (G.A. Salsbury); SW> Finney and Kearny= none (M.L. Shuman); and NE> Atchison and Jefferson= larvae, 6.4-25 mm long, averaged trace and none in 2 fields, respectively (B.D. Hilbert). MISSOURI - Moderate to heavy in harvested alfalfa. Area> larvae per 0.09 sq m: SW> 2-20 in fields; 4th and 5th instars heavy under bales and piles of hay left in field. (R.E. Munson). INDIANA - District> County= eggs on alfalfa: WC> Warren= in 1 field May 20. (R.W. Meyer).

ALFALFA LOOPER (*Autographa californica*) - NEW MEXICO - District> County= larvae per 25 sweeps of alfalfa: SE> Lea= averaged 2-3. (T. Riddle).

GREEN CLOVERWORM (Plathypena scabra) - INDIANA - District> County= status on alfalfa: WC> Tippecanoe= first adult in blacklight trap May 18. (M. Ross).

ALFALFA CATERPILLAR (Colias eurytheme) - NEW MEXICO - District> County= larvae per 25 sweeps of alfalfa: SE> Lea= mostly early instars averaged 5-7. (T. Riddle).

ALFALFA WEBWORM (Loxosteges commixtalis) - IOWA - District> County= status on alfalfa: WC> Ida= Larvae, 15 mm long, damaged about 8 ha. (J.R. DeWitt).

ALFALFA BLOTCH LEAFMINER (Agromyza frontella) - NEW YORK - Area> County= status on forage: C> adult emergence peaked around May 22, pinholing by adult females common (Helgesen); SE> Columbia= first larval mine observed May 16 (Piester).

PEA APHID (Acyrthosiphon pisum) - NEW MEXICO - District> County= status: SE> Lea and Eddy= populations decreased sharply on forage legumes (L. Gholson), and Lea= averaged 2-3 per 25 sweeps of alfalfa in Hobbs area (T. Riddle).

FLORIDA - District> County= counts per 100 sweeps of alfalfa [blooming]: C> Alachua= nymphs and adults about 1,600. (F.W. Mead). OHIO - District> County= status on alfalfa: C> Fairfield= 0.4 and 3.4 per sweep. (G.P. Walker).

POTATO LEAFHOPPER (Empoasca fabae) - INDIANA - District> status on alfalfa: WC, NW, and NC> nymphs 0 but adults 0 per 100 sweeps to 2-3 per 25 sweeps. Survey days very windy. (R.W. Meyer). ILLINOIS - Area> status on alfalfa: Southern two-thirds> adults slowly increased in many fields, and C> Logan= adults about 35 per 100 sweeps in 1 field. (K. Black). WISCONSIN - First migrants of season. District> County= status on alfalfa: C> Marquette and Waushara, and SC> Jefferson and Green= migrants 0-1 per 10 sweeps, apparently arrived on latest weather front from southwest. (O.L. Lovett).

MEADOW SPITTLEBUG (Philaenus spumarius) - WISCONSIN - District> County= counts per 10 alfalfa stems: SC> Rock= heaviest count of 5, and southern one-third area> 0.25-2. (O.L. Lovett). OHIO - District> County= status on alfalfa: C> Fairfield= large nymphs up to 0.8 per sweep. (G.P. Walker).

LYGUS BUGS (Lygus spp.) - ARIZONA - District> County= nymphs and adults on alfalfa: C> Maricopa= 3-80 and 7-200 per 100 sweeps, Pinal= 400-650 and 227356 per 100 sweeps; and SE> Graham= 13 and 13 per 10 sweeps. (W. Pilling et al.).

TARNISHED PLANT BUG (Lygus lineolaris) - FLORIDA - District> County= nymphs and adults per 100 sweeps of alfalfa [blooming]: C> Alachua= 25 and 102 at Gainesville. (F.W. Mead). OHIO - District> County= status on alfalfa: C> Fairfield= nymphs many and adults up to 0.1 and 0.4 per sweep. (G.P. Walker).

ALFALFA PLANT BUG (Adelphocoris lineolatus) - MINNESOTA - First 1st instar nymphs of season. District> County= average per 10 sweeps in 15 alfalfa fields: WC> Douglas and C> Wright and Stearns= 1. (D. Sreenivasam).

PEANUTS

INSECTS

LESSER CORNSTALK BORER (Elasmopalpus lignosellus) - FLORIDA - District> County= status on peanuts: C> Levy in Chiefland and Williston areas and Alachua at Newberry= infested 50% of 404.7 ha, 10% of infested acreage needed treatment. (R.B. Baker).

TOBACCO THrips (*Frankliniella fusca*) - FLORIDA - District> County= counts per peanut bud: NW> Jackson= very heavy, averaged 2.2 May 16, jumped to 31.6 by May 21, at Greenwood; plot with heaviest population averaged 34.3, heaviest ever observed by Tappan. (W.B. Tappan).

COTTON

INSECTS

BOLL WEEVIL (*Anthonomus grandis grandis*) - MISSISSIPPI - Adults in pheromone traps week of May 16 (R. Anderson):

<u>District> County</u>	<u>Adults</u>	<u>No. traps</u>
EC> Monroe	3	13
SW> Hinds	2	4
SW> Adams	4	8
SW> Lincoln	16	2
C> Scott	8	2
C> Rankin	9	11
C> Carroll	4	8
SC> Covington	156	8

BLACK CUTWORM (*Agrotis ipsilon*) - MISSISSIPPI - Many areas> stand reduction by mostly this species on cotton [seedling], particularly in Delta and southern areas. Damage heaviest in low spots of fields and fields in pasture in 1978. (R.B. Head).

BEET ARMYWORM (*Spodoptera exigua*) - NEW MEXICO - District> County= larval status on cotton: SE> Eddy= scattered heavy populations required treatment in northern area. (L. Gholson).

THrips (*Frankliniella spp.*) - MISSISSIPPI - Area> status on cotton [seedling]: Statewide> damage continued, particularly in fields where growth slowed due to excess water. (R. Anderson).

TOBACCO

DISEASES

BLUE MOLD (*Peronospora tabacina*) - FLORIDA - First symptoms seen since early 1960's. District> County= status on tobacco: NE> Suwannee= in test plots and at least 2 commercial fields, indicating it may be widespread in Live Oak area. May be associated with average temperature of -17 to -16°C below normal this spring. (W.B. Tappan).

POTATO VIRUS Y - FLORIDA - District> County= status on tobacco: NE> Suwannee= veinbanding increased at Live Oak, worse than usual for time of year. (W.B. Tappan).

INSECTS

TOBACCO BUDWORM (*Heliothis virescens*) - NORTH CAROLINA - Wet fields hampered controls severely across entire Coastal Plain. District> County= status on tobacco: Southern Coastal> Bladen= 90 of 358 fields (about 600 ha) at or above threshold level, heaviest plant infestation 26%, averaged 4.3% (A. Baumhover);

Central Coastal> Lenoir= tobacco budworm infested 30% and Greene= averaged 4% infested in 5 test plots, heaviest infestation 10% in 5 fields sampled. (A. Harper, S. Southern).

TOBACCO HORNWORM (*Manduca sexta*) - NORTH CAROLINA - First larvae of season. District> County= status: Central Coastal> Johnston= 1st instar on tobacco. Adults increased in light traps, expected to increase more. (S. Southern).

MISCELLANEOUS FIELD CROPS

INSECTS

REDBACKED CUTWORM (*Euxoa ochrogaster*) - OREGON - County= larvae per 0.09 sq m of peppermint (some spearmint): Crook and Jefferson= up to 11 on 647.5 ha. Treatment threshold levels varied by field age and condition, controls needed on about 0.17 of above hectares. (G. Fisher).

CARROT BEETLE (*Bothynus gibbosus*) - SOUTH CAROLINA - District> County= status: C> Lee at Bishopville and Clarendon at Manning= fed on young sunflowers. (B. Rummage et al.).

BLACK VINE WEEVIL (*Otiorrhynchus sulcatus*) - IDAHO - First adult of season. District> County= percent Larvae, pupae, and adults in hops soil samples May 17: SW> Canyon= 50%, 37%, and 13% at Caldwell. (C.R. Baird).

LYGUS BUGS (*Lygus* spp.) - ARIZONA - District> County= nymphs and adults per 50 sweeps of safflower: C> Maricopa= 16 and 22-70 and Pinal= 15 and 100+. (J. Childers et al.).

TWOSPOTTED SPIDER MITE (*Tetranychus urticae*) - OREGON - Area> status on unplowed mint: C> moderate to severe, 11 ha required treatment. (G. Fisher).

POTATOES, TOMATOES, PEPPERS

INSECTS

COLORADO POTATO BEETLE (*Leptinotarsa decemlineata*) - VIRGINIA - District> County= status on truck crops: E> Accomack= pest at least 10 days ahead of 1978 schedule. All stages on plants, occasional "cherry" larvae beginning to enter soil to pupate and emerge as second brood adults. Much early season adult damage occurred, smaller plants damaged most. (R.N. Hofmaster). NEW YORK - First of season. District> County= adults on potatoes: W> Wayne= in central area on mucklands May 17. (MacNeil).

BEANS AND PEAS

INSECTS

MEXICAN BEAN BEETLE (*Epilachna varivestis*) - FLORIDA - Predicted economic damage occurred in gardens. District> County= status: C> Alachua= damaging populations scattered and damage seldom enough to prevent normal harvest, and Bradford, Union, and NE> Columbia= chemical controls generally applied for first time since 1976 following releases of *Pediobius foveolatus* (a eulophid wasp). Bradford= Mexican bean beetle egg masses averaged 0.2, 1st instar larvae 2.1, 2nd instar larvae 3.2, 3rd instar larvae 9.3, 4th instar larvae 5.7, pupae 0, and adults 0.4 per 0.3 m on bush lima beans near Brooker, May 10. Total of

150 Pediobius released at this site supplemented by release of 1,500 on May 17; parasitized Mexican bean beetle larvae resulting from first release recovered May 23. (R.I. Sailer).

COLE CROPS

INSECTS

IMPORTED CABBAGEWORM (Pieris rapae) - KANSAS - First larvae of season. District> County= larvae, 1.9 cm long, and pupa on cabbage in garden week ending May 18: EC> Shawnee= infested 100% of plants at Rossville. (J.D. Lambley). OHIO - First larvae of season. District> County= status May 14: NC> Erie= in garden. (H.B. Hand). NEW YORK - Larvae fed on yellow rocket, current potential for damage to cabbage transplants. (Eckenrode).

GENERAL VEGETABLES

INSECTS

ASPARAGUS BEETLE (Crioceris asparagi) - NEVADA - New independent city record. District> Independent City= collection data on garden asparagus: W> Carson City= damage heavy May 16, 1979. Collected by M. Archibald. Determined by R.C. Bechtel. (R.C. Bechtel).

SPOTTED ASPARAGUS BEETLE (Crioceris duodecimpunctata) - IDAHO - First adults of season. District> County= status May 23: N> Latah= in garden at Moscow. (W.F. Barr).

DECIDUOUS FRUITS AND NUTS

DISEASES

APPLE SCAB (Venturia inaequalis) - WISCONSIN - District> County= status on fruit trees: SC> Dane= leaf lesions began to develop on flowering crabapple and apple. (O.L. Lovett). VERMONT - County= percent unformed spores, percent spore immaturity, percent spore maturity, and percent discharged on fruit trees May 17-24: Windham at Putney= 23%, 50%, 12%, and 15%; Addison at Shoreham= 16%, 14%, 25%, and 45%; Grand Isle at South Hero= 20%, 15%, 26%, and 39%; and Bennington at Bennington= 17%, 83%, 0% (some possibly available for infection), and 0%. (R.E. Desrosiers).

INSECTS

WINTER MOTH (Operophtera brumata) - OREGON - County= larval status week ending May 18: Clackamas, Multnomah, and Washington= completed development, now scarce throughout known infested area; Multnomah= damage heavy from surveys May 15-17 just east of west Portland. Pupae in most sampled sites. (R.L. Penrose et al.).

SPRING CANKERWORM (Paleacrita vernata) - OHIO - Outbreak expected in 1979. District> County= status on elm, hackberry, and apple trees: SW> Montgomery and C> Franklin= larvae defoliated 20% of trees. (W.K. Roach).

CODLING MOTH (Laspeyresia pomonella) - KANSAS - First of season. District> County= status in pheromone traps: SE> Neosho and EC> Shawnee= first caught in apple orchards week ending May 11; SC> Harvey= first adults, week ending May 18; and NE> Pottawatomie and Doniphan= none, week ending May 18. (K.O. Bell, Jr.). OHIO - District> County= status: NE> Wayne and NC> Ashland= collections

from 4 pheromone traps increased; 2 codling moths caught May 10-14 compared with 11 caught May 18-21. (F. Hall). NEW YORK - First of season. District> County= adults: W> Ontario= taken in pheromone trap in western area May 14 (Leeper); SE> Columbia= trap catches in abandoned and commercial fruit orchards (Ophardt). LESSER APPLEWORM (Grapholitha prunivora) - NEW YORK - First adult of season. District> County= adult status May 18: W> Ontario= taken in pheromone trap. (Leeper).

EASTERN TENT CATERPILLAR (Malacosoma americanum) - WISCONSIN - District> County= status: SC> Columbia= northern border appeared to be northern limits of heavy feeding and tent making; Rock and Green= larvae, 3.8 cm long, migrated to adjacent trees after completely defoliating several cherry trees. (O.L. Lovett).

PLUM CURCULIO (Conotrachelus nenuphar) - NEW HAMPSHIRE - First adults active. County= adults on apple trees May 16: Rockingham= noted at Nottingham. (G.T. Fisher).

WESTERN CHERRY FRUIT FLY (Rhagoletis indifferens) - WASHINGTON - First adults. District> County= status May 14: C> Yakima= noted at Grandview. (J. Forquer, B. Hudson).

WHITE APPLE LEAFHOPPER (Typhlocyba pomaria) - OHIO - District> County= status on apple trees: C> Fairfield= about 3.5 1st to 3rd instars in unsprayed trees, hatch later than normal. First generation heavier than normal and problems expected with heavier second generation in August unless controls applied soon. (R.P. Holdsworth). NEW YORK - First of season. District> County= status: W> Wayne= egg hatch in central area May 8 (Misiti); western fruit area> hatch heavy; and SE> Columbia= nymphs in Hudson Valley area (Ophardt).

SAN JOSE SCALE (Quadraspidiotus perniciosus) - NEW YORK - First of season. District> County= adult May 23: Wayne= taken in pheromone trap. (Bruno, Way).

PECAN NUT CASEBEARER (Acrobasis nuxvorella) - NEW MEXICO - District> County= status: SE> Lea= no larvae, damaged terminals, or nuts observed on pecan trees in Hobbs area. (T. Riddle).

PECAN PHYLLOXERA (Phylloxera devastatrix) - ARKANSAS - District> County= status of this species and PECAN SPITTLEBUG (Clastoptera achatina) on pecan trees: In various parts of southeastern area> mostly in SE> Desha and Ashley= heavy. (M. Wall).

SMALL FRUITS

INSECTS

REDBANDED LEAFROLLER (Argyrotaenia velutinana) - OHIO - District> County= status on grapes: SE> Washington= many adults in vineyard, no larvae observed (G.P. Walker); NE> Wayne and NC> Ashland= adult flights decreased, 304 collected from 4 pheromone traps May 10-14 compared with 13 May 18-21 (F. Hall).

STRAWBERRY WEEVIL (Anthonomus signatus) - OHIO - District> County= status on young strawberry buds: NC> Erie= clipped and destroyed 40-50% in 6.1 ha field. (R. Williams).

FOREST AND SHADE TREES

DISEASES

EASTERN GALL RUST (Cronartium quercuum) - WISCONSIN - District> County= status: C> Wood= aecia broke through galls on branches of jack pine. (O.L. Lovett).

DUTCH ELM DISEASE (Ceratocystis ulmi) - WISCONSIN - First positive samples cultured from carryover infection from 1978. New symptoms should be evident shortly. (O.L. Lovett).

INSECTS

NORTHERN PINE WEEVIL (Pissodes approximatus) - OHIO - District> County= status: NE> Lake= this species and PALES WEEVIL (Hylobius pales) severely flagged Scotch pine and fatally girdled spruce [seedling]. (M. Dunlap).

NANTUCKET PINE TIP MOTH (Rhyacionia frustrana) - ARKANSAS - District> County= larval status on ornamental pine trees: SE> Jefferson= heavy near Pine Bluff. (M. Wall).

BLACK PINELEAF SCALE (Nuculaspis californica) - FLORIDA - New county record. District> County= collection data on Pinus elliottii (slash pine): NW> Gulf= adults infested leaves near Overstreet. Collected by J. Felty, February 13, 1979. Determined by A.B. Hamon. Host growing in wild. (J. Felty).

PINE NEEDLE SCALE (Chionaspis pinifoliae) - NEBRASKA - District> County= egg status: E> Lancaster= about one-third hatched. (Johnson).

EUROPEAN PINE SAWFLY (Neodiprion sertifer) - WISCONSIN - District> County= status on red pine by May 23: SE> Walworth= larvae in 3rd instar. (O.L. Lovett). OHIO - District> County= larval status on pines: WC> Darke and Miami, C> Delaware and Franklin, and NE> Lake= on several species (R. Irwin et al.); C> Delaware= 4-5 per branch in planting of 25 red pines (R. Irwin).

ELM LEAF BEETLE (Pyrrhalta luteola) - KANSAS - First hatch of season. District> County= status: SE> Crawford (P.L. Nixon), SC> Kiowa (G.P. Salsbury), and NE> Riley (H.E. Thompson)= hatch underway.

FOREST TENT CATERPILLAR (Malacosoma disstria) - WEST VIRGINIA - District> County= larvae per red oak tree: E> Jefferson= 10-25 (averaged 17), defoliation light. (J.D. Hacker, A.R. Miller).

ELM SPANWORM (Ennomos subsignarius) - OHIO - District> County= status: C> Franklin= defoliated 50-70% of elm and 25% of boxelder and cottonwood trees. (D.H. Horn).

MAN AND ANIMALS

INSECTS

HORN FLY (Haematobia irritans) - NEBRASKA - District> County= adult average per head on untreated cattle: SW> Lincoln and C> Dawson= 53. (Campbell). KANSAS - District> County= adult averages per head on range cattle: SW> Clark= 50-75. (M.L. Shuman). MISSISSIPPI - Horn fly increased over past 3 weeks. District> County= adults on cattle: EC> Oktibbeha, Lowndes, Clay, and Noxubee= 50-300+. (R. Anderson).

FLORIDA - District> County= horn fly averages per head of cattle: C> Alachua= 270 in small beef herd at Newberry (D. Boyd) and Hillsborough= 160 in 2 beef herds at Ruskin, expected to increase heavily in future (D. Simon).

FACE FLY (*Musca autumnalis*) - NEBRASKA - District> County= adult average per face on untreated cattle: SW> Lincoln and C> Dawson= less than 1. (Campbell). NORTH DAKOTA - First of season. District> County= status May 16: SE> Richland= males observed. (Meyer). ILLINOIS - District> adult average per 10 animals: NW> 1. (Moore). OHIO - District> County= adults on cattle: SE> Washington= 15 per head. (G.P. Walker).

STABLE FLY (*Stomoxys calcitrans*) - FLORIDA - Area> status: S> worse than in 1978 until about 3 weeks ago when heavy rains fell; flies bred in piles of hay. (P.G. Koehler). District> County= counts per head of cattle: C> Hillsborough= averaged 20 in 2 beef herds at Ruskin, expected to show marked increase in 5-6 weeks, which will be 2-3 weeks after end of tomato season. Large acreages of rotting tomato vines will provide suitable habitat for breeding. (D. Simon). OHIO - District> County= status on cattle: SE> Washington= 30 per head. (G.P. Walker). ILLINOIS - District> adult average per 10 animals: NW> 1. (Moore).

MOSQUITOES - NEW MEXICO - District> County= status: NW> Bernalillo= *Culex* spp. adults heavy following recent rains in Albuquerque area. *Aedes vexans* moderate to heavy in alfalfa fields in Albuquerque South Valley, very annoying to man and animals. (C. Henninger).

WISCONSIN - District> County= mosquito status: WC> Jackson and NE> Langlade= annoyance to humans began to increase; SC> Dane= *A. vexans* trace in suburban site. Abundance of water in many poorly drained lowlands likely to produce heavy populations as warmer summer temperatures arrive. (O.L. Lovett). OHIO - Several species of adults emerged statewide. District> County= status: NC> Richland= *Aedes stimulans* populations heavy. (R. Berry).

BENEFICIAL ORGANISMS & THEIR ENEMIES

INSECTS

TENSPOTTED LADY BEETLE (*Coelophora pupillata*) - OHIO - Adults common in most alfalfa and wheat fields surveyed. District> County= adults per sweep of alfalfa: C> Fairfield= 0.5. (G.P. Walker).

A MYMARID WASP (*Anaphes flavipes*) - District> County= recoveries of 20% parasitism of *Oulema melanopus* (cereal leaf beetle) eggs from individual oat fields (unless stated otherwise) May 7-16: KENTUCKY - E> Lewis= 100% (wheat field) and 64% near Tollesboro, and Bluegrass> Fleming= 22%, 33%, 100%, and 60% near Mt. Carmel; INDIANA - SE> Franklin= 25% in Springfield Township; OHIO - C> Licking= 25% in Washington Township; MARYLAND - NC> Washington= 33% and 25% in Clear Spring Magisterial District; and PENNSYLVANIA - C> Blair= 67% and 22% in North Woodbury Township. (T.L. Burger).

A EULOPHID WASP (*Tetrastichus julis*) - MICHIGAN - District> County= percent parasitism of *Oulema melanopus* (cereal leaf beetle) larvae in wheat and grasses: SW> Berrien= 41% in Galien Township, May 21. (T.L. Burger).

AN ICHNEUMONID WASP (*Bathyplectes curculionis*) - OHIO - District> County= counts per sweep of alfalfa for this larval parasite of *Hypera postica* (alfalfa weevil): C> Fairfield= 0.03. (G.P. Walker).

A REDUVIID BUG (*Stenolemus lanipes*) - FLORIDA - New county record. District> County= collection data: C> Alachua= 1 adult in blacklight trap at Gainesville. Collected by L. Stange, April 17, 1979. Determined by F.W. Mead. (L. Stange).

FEDERAL AND STATE PROGRAMS

INSECTS

CEREAL LEAF BEETLE (*Oulema melanopus*) - INDIANA - Damage economic. District> County= status on wheat: SC> Harrison= larvae averaged up to 1.7 per stem, damage economic in several fields. (C. Wilson, D. Matthew). OHIO - District> County= larvae per wheat plant: SE> Washington= heavy, up to 5 per plant; frosted about 75% of fields. (C.J. Cunningham).

District> County	Eggs per stem	Larvae per stem	Adults per sweep	Host stage
C> Fairfield	0.63	0.23	0.09	three-fourths headed to ears unsheathed
C> Fairfield	0.10	0.17	0.01	ears unsheathed
SE> Perry	0.30	2.13	0.06	first ears visible
SE> Washington	-	5.1	less than	
			0.01	three-fourths headed
SE> Washington	-	4.4	0.11	three-fourths headed
SE> Washington	0.07	3.0	0.01	three-fourths headed
SE> Washington	0.13	0.43	0.04	three-fourths headed
SE> Washington	less than			
	0.03	0.43	0.05	three-fourths headed

VIRGINIA - Cereal leaf beetle damage widespread, caused concern in small grains. District> County= infestation status: C> Goochland= on wheat and Bedford= on oats; and E> James City= on barley. (W.A. Allen).

GRASSHOPPERS - CALIFORNIA - District> County= status of Oedaleonotus enigma enigma: Southern California> Los Angeles= first appeared after first cutting of alfalfa in Lancaster area May 16 on about 40+ ha; large immatures and adults 15-20 per sweep. Moved into most alfalfa fields just before second cutting May 21, growers began spraying. Fed on pine tree needles in area and on gardens and lawns in populated areas within city limits. Pavement covered with grasshoppers. San Joaquin Valley> Kern= first appeared May 10, damage light on cotton as infestation migrated from foothills. On May 21 confined to 3 "hotspots" in Petland area, spread seemed under control by individual growers. Tulare= probably this species averaged 5-7 per 0.8 sq m east of Woodlake. (J. Gobin).

NEW MEXICO - District> County= grasshopper status on rangeland: SE> Lea= unspecified nymphs ranged 25-150 per 0.8 sq m in Caprock area. (T. Riddle). KANSAS - District> County= nymphal averages per 0.8 sq m: SC> Barber= 1st and 2nd instars heavy at 2 rangeland sites, Comanche= 1st and 2nd instars heavy at 1 site, Stafford= 2nd instar Melanoplus sanguinipes 20+ at 1 site along alfalfa field margin, Kiowa= Melanoplus foedus and Melanoplus angustipennis heavy around margin of alfalfa field where heavy in 1978 (G.A. Salsbury); SW> Clark= 2nd instars of mostly undetermined slantfaced nymphs 35-40 at rangeland sites south of Ashland, some Melanoplus bivittatus in road ditches in area (M.L. Shuman, D.E. Mock), Stevens= small nymphs 15-20 at rangeland site, and Kearny= small nymphs 20-25 in spots at rangeland site (M.L. Shuman).

NEBRASKA - District> County= grasshoppers per 0.8 sq m of rangeland: N> Grant= egg pods averaged 9, about 1 week from hatch, and Thomas= egg pods a few days from hatch, Grant= Melanoplus sanguinipes and other undetermined species averaged 20 in southwestern area and ranged up to 15 (averaged 6.5) in southeastern area, Cherry= undetermined species ranged 0-20 in southeastern area, and Hooker= 3-5. (Strasia).

NORTH DAKOTA - District> County= status of Melanoplus sanguinipes: SC> Morton= some hatch in lighter soil areas, egg development 60% eyespot and 40% segmented; egg development in heavier soil, 6% clear, 50% coagulated, 22% eyespot, and 22% segmented. (W.J. Brandvik).

PINK BOLLWORM (Pectinophora gossypiella) - ARIZONA - District> County= pheromone trap counts: C> Maricopa= adults 0-1 per trap per day at Harquahala and Rainbow Valley and SW> Yuma= 11, 75, 4, and 10 from 4 traps May 14-28. (L. Blackledge, Mullis).

SCREWWORM (Cochliomyia hominivorax) - Five cases reported from continental United States April 29 to May 5 in Arizona. Number of sterile flies released this period totaled 32,791,005 as follows: Texas 17,946,205; New Mexico 3,208,000; Arizona 11,236,800; California 400,000. Total of 66,604,995 sterile flies released within eradication zone of Mexico. (J.E. Novy, M.E. Meadows).

HAWAII PEST REPORT

General Vegetables - WESTERN FLOWER THRIPS (Frankliniella occidentalis) infestations and feeding damage moderate to heavy on 0.1 ha of Manoa lettuce at Hawaii Kai, Oahu. Spotted wilt-like symptoms transmitted by thrips observed in planting. (L.M. Nakahara, D.S. Henderson).

Miscellaneous - In mid-April, heavy populations of a LYGAEID BUG (Nysius coenosulus) observed on Amaranthus and Chenopodium near crop areas at Lalamilo Hawaii. Clusters of adults, 20-30 per cluster, on some weeds. Adults heavy on Amaranthus in crop areas at Pulehu, Maui, during same period. About 500,000+ adults in 92.90 sq m section of weeds at that site. As a group, Nysius species primarily seed feeders on various weeds. Adults occasionally implicated with feeding damage to some crops and ornamentals. In the past, heavy adult populations caused serious nuisance problems in and around scientific and communication installations. Heavy populations cause concern as heavy numbers can cause contamination problems in exported produce around packing areas. (E.R. Yoshioka et al.).

DETECTION

NEW NORTH AMERICAN RECORD

WEEDS

A RICEGRASS (Piptochaetium stipoides var. purpurascens) - CALIFORNIA - District> County= collection data: Central Coast> Marin= specimen collected from hillside near Dogtown by T. Fuller, D. Barbe, and P. Economou, June 2, 1978. Determined by B. Rosengurtt. (C.S. Papp). Known from Argentina and Uruguay. Probably not economic. (E.E. Terrell).

NEW COUNTY AND INDEPENDENT CITY RECORDS

INSECTS

ASPARAGUS BEETLE (Crioceris asparagi) - NEVADA - Carson City. (p. 339).

BLACK PINELEAF SCALE (Nuculaspis californica) - FLORIDA - Gulf. (p. 341).

A REDUVIID BUG (Stenolemus lanipes) - FLORIDA - Alachua. (p. 343).

WEEDS

A VERVAIN (Verbena halei) - CALIFORNIA - District> County= collection data: Southern California> Orange= specimen collected along freeway at Anaheim by G. Jackson, April 23, 1978. Determined by D. Barbe. (C.S. Papp).

CORRECTIONS

Change the credit (F.W. Mead) for the six notes as indicated below:

CPPR 4(10):99 - BEET ARMYWORM (Spodoptera exigua) should be (E.R. Mitchell).

CPPR 4(10):104 - CITRUS BLACKFLY (Aleurocanthus woglumi) should be (R. Larkin, G. Gwin).

CPPR 4(12):155 - CABBAGE LOOPER (Trichoplusia ni) and DIAMONDBACK MOTH (Plutella xylostella) should be (R.B. Workman).

CPPR 4(12):156 - RED IMPORTED FIRE ANT (Solenopsis invicta) should be (C.T. Adams).

CPPR 4(15):236 - VEGETABLE LEAFMINER (Liriomyza sativae) should be (D.J. Schuster).

CPPR 4(17):288 - A BRACONID WASP (Microctonus aethiopoides) - TENNESSEE - "... female parasitism of Hypera postica (alfalfa weevil) larvae:" should read "... female parasitism of Hypera postica (alfalfa weevil) adults: ..." (M.E. Cooper).

CPPR 4(18):297 - EUROPEAN CORN BORER (Ostrinia nubilalis) - Both "(base 50°F)" should read "(base 50°F)".

LIGHT TRAP COLLECTIONS

LIGHT TRAP COLLECTIONS

Pest Interceptions of Quarantine Significance at Ports of Entry

Plant Importation and Technical Support Staff
Plant Protection and Quarantine Programs, USDA

<u>Life Stage</u>	<u>Host</u>	<u>Probable Origin</u>	<u>Port of Entry</u>	<u>Desti-nation</u>
<i>Ceratitis capitata</i> (Wiedemann) <u>Mediterranean fruit fly</u> Det. R.P. Higgins	larval in quince from baggage	Peru	Miami	FL
<i>Conarthrus ferrugineus</i> (Wollaston) <u>a weevil</u> Det. D.R. Whitehead	adult in broom straw from cargo	Republic of China	New York	NY
<i>Dacus dorsalis</i> Hendel <u>Oriental fruit fly</u> Det. R.K. Kunishi	larval in guava from baggage	Hawaii	Honolulu	CA
<i>Dryocoetes villosus</i> (Fabricius) <u>a scolytid beetle</u> Det. D.M. Anderson	adult in wood crates of compressors	West Germany	New York	NY
<i>Ips typographus</i> (Linnaeus) <u>a scolytid beetle</u> Det. F. Krim	adult in wood crates of brass	Poland	New York	RI
<i>Scolytus scolytus</i> (Fabricius) <u>a scolytid beetle</u> Det. D.M. Anderson	adult in wood crates with iron forgings	Netherlands	Philadelphia	PA
<i>Taphrorychus villifrons</i> (Du Four) <u>a scolytid beetle</u> Det. D.M. Anderson	adult in Dunnage	United Kingdom (?)	Port Arthur	TX
<i>Trogoderma granarium</i> Everts <u>Khapra beetle</u> Det. F. Krim	larval on bales of sheepskins	Sudan	New York	NY



METRIC CONVERSION

1 cm	= 0.393701 in
1 m	= 3.28084 ft = 1.09361 yd
1 km	= 0.621371 mi
1 sq cm	= 0.155000 sq in
1 sq m	= 10.7639 sq ft = 1.19599 sq yd
1 ha	= 2.47104 acres
1 sq km	= 0.386101 sq mi
1 kg	= 2.20462 lb
1 t (metric ton)	= 1.10231 short ton
1 kg/ha	= 0.892183 lb/acre
1 t/ha	= 0.446091 ton/acre

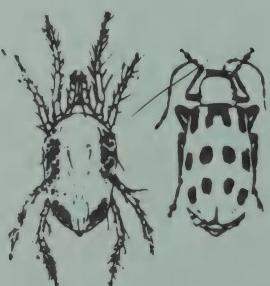
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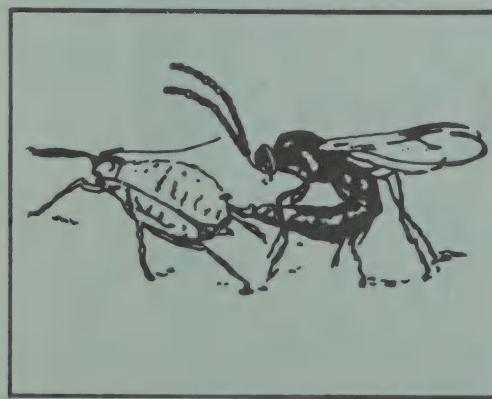
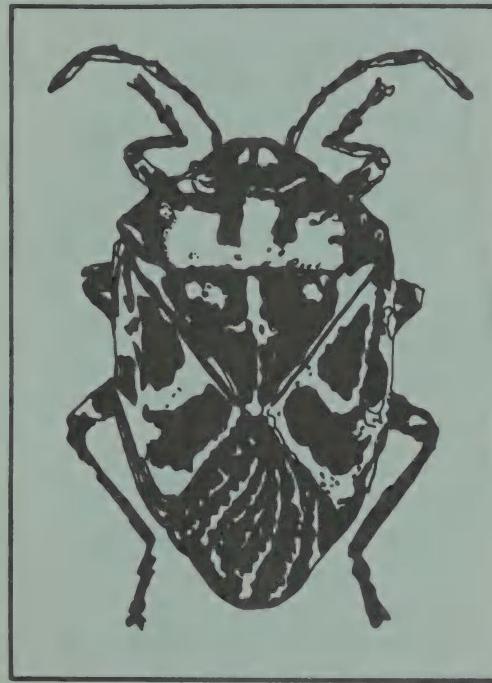
Cooperative PLANT PEST REPORT

U.S.
DEPARTMENT
OF AGRICULTURE

June 8, 1979

Animal
and Plant
Health
Inspection
Service

Vol. 4
No. 20



This publication is distributed weekly to Federal and State agencies, universities, farmers, and others interested in containing or controlling pests in the United States.

Data included in this publication are compiled from reports submitted by cooperating State, Federal and other agricultural and industrial specialists. Accuracy of the reports is not verified prior to publication.

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Correspondence should be directed to:

CP PR

New Pest Detection and Survey Staff
Plant Protection and Quarantine Programs
Animal and Plant Health Inspection Service
U.S. Department of Agriculture
Federal Building #1
Hyattsville, Maryland 20782

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COOPERATIVE PLANT PEST REPORT**HIGHLIGHTS**Current Conditions

Overwintering EUROPEAN CORN BORER survival increased in Minnesota. (p. 351).

BLACK CUTWORM above economic threshold in some Kentucky corn fields. (p. 351).

WHEAT POWDERY MILDEW infections in Kansas developed rapidly, severity up to 50% in some fields. (p. 353).

ARMYWORM damage on small grains heavy in Tennessee, Kentucky, and Virginia. (p. 354).

ALFALFA WEEVIL tip feeding on alfalfa tips up to 100% in Wisconsin, treatments in Indiana probably too late (p. 355), and controls needed in Maryland (p. 356).

TOBACCO BUDWORM in North Carolina above threshold on tobacco. (p. 357).

APPLE SCAB problems expected in New Hampshire if wet weather continues. (p. 359).

GRASSHOPPERS in California pose potential hazard for alfalfa fields. (p. 361).

Detection

For new county records see page 362.

Some First Occurrences of the Season

EUROPEAN CORN BORER eggs and larvae in Kentucky. ARMYWORM larvae in Maryland. SEEDCORN MAGGOT in Iowa. WHEAT STRIPE RUST, BASAL GLUME ROT, and BLACK CHAFF in Kansas. MEXICAN BEAN BEETLE egg mass in Indiana. BOLL WEEVIL adults in Oklahoma. CODLING MOTH and EASTERN TENT CATERPILLAR adults in Wisconsin. PECAN NUT CASE-BEARER eggs and BAGWORM in Oklahoma. DOGWOOD BORER adult in Kentucky. PERIODICAL CICADA eggs in Virginia. ALFALFA LEAFCUTTING BEE and a SAPYGINID WASP in Idaho.

Reports in this issue are for the week ending June 1 unless otherwise indicated.

CONTENTS

Corn, Sorghum, Sugarcane Insects.....	351	Potatoes, Tomatoes, Peppers Diseases.....	358
Small Grains Diseases.....	353	Beans and Peas Insects.....	358
Insects.....	354	Cole Crops Insects.....	358
Turf, Pastures, Rangeland Diseases.....	354	Cucurbits Diseases.....	358
Insects.....	354	Insects.....	358
Forage Legumes Diseases.....	354	Deciduous Fruits and Nuts Diseases.....	359
Insects.....	355	Insects.....	359
Soybeans Insects.....	356	Ornamentals Insects.....	359
Peanuts Insects.....	357	Forest and Shade Trees Insects.....	360
Cotton Insects.....	357	Man and Animals Insects.....	360
Tobacco Diseases.....	357		
Insects.....	357		
Beneficial Organisms and Their Enemies Insects.....	361		
Federal and State Programs Insects.....	361		
Detection.....	362		
Light Trap Collections.....	363		
Pest Interceptions of Quarantine Significance at Ports of Entry.....	364		

CORN, SORGHUM, SUGARCANE

INSECTS

EUROPEAN CORN BORER (*Ostrinia nubilalis*) - IOWA - District> County= status on corn: C> Story= about 20% of surviving borers in 1 field pupated by May 28. (L.H. Townsend). MINNESOTA - Area> overwintering survival on corn: Statewide 53% compared with 22% in 1978. Fall 1978 infestation surveys in 33 counties and 165 corn fields showed decrease from 1977 population, except in west-central district. Potential for heavy first generation borers, too early to tell due to delayed corn planting. Only 1 adult taken in light trap at Fergus Falls. District> degree-day accumulations (base 10°C) May 7-20: SW> 48, SC> 57.8, SE> 81.7. Pupa and adult development require 137 and 235 degree days, respectively. Development still 7 days behind 1978 by present indications.

WISCONSIN - District> County= European corn borer status: SW> Sauk= adults rather heavy in oats and in margins of alfalfa fields near Spring Green, cool evening temperatures prevented most activity around blacklight and pheromone traps. Males and females present, 1 female gravid. SC> Dane= dissections of cornstalks revealed 4% empty pupal cases, 64% pupae, and 32% 5th instar larvae near Oregon. No corn observed in any area would support larvae. Alternate hosts may attract heavier than normal egg laying in immediate future. (O.L. Lovett).

KENTUCKY - First European corn borer eggs and larvae of season. District> County= status on corn: Bluegrass> Fayette= 9 eggs on 600 plants in field, May 21 (none on 200 plants May 20) and Midwestern> Christian= eggs in field week ending May 25 and larvae on May 30. Eggs found throughout most of State.

MARYLAND - Adult activity increased in all areas (daily average ranged 2-30 per night). No significant damage to corn. District> County= status week ending May 25: NC> Baltimore= first significant damage to sweet corn expected week ending June 1. (J.L. Hellman).

BLACK CUTWORM (*Agrotis ipsilon*) - IOWA - Southern area> status on corn: cutting underway; few fields needed treatment. (L.H. Townsend).

KENTUCKY - Black cutworm larvae damaged corn fields in many areas. District> County= status on corn: Midwestern> Christian= damage noticeable in 10 (239 ha) of 34 fields (728.4 ha), 1.5% (average) plants cut, treatment needed in 3 fields, Logan= 1-2% (average) plants cut in 29 fields (468.2 ha), treatment recommended in 3 fields, Simpson= above economic threshold in 4 (32 ha) of 22 fields (563.3 ha), and Union= 60.7+ ha treated near Ohio River; and Central> Hardin= larvae cut 1% (average) of plants in 25 fields (367 ha), damage in 7 fields above economic threshold. (P.E. Sloderbeck et al.).

CORN EARWORM (*Heliothis zea*) - ARIZONA - District> County= status on corn: SW> Yuma= infested 80% of early maturing ears, larvae 2-3 per ear on late-maturing corn. (Mullis).

FLORIDA - District> County= corn earworm status on corn: C> Alachua= population increased, still not heavy. Adults averaged 7-8 per pheromone trap per night at Alachua. Percent damaged ears in treated sweet corn less than one-half of 1%; however, damage light to moderate in 80% of ears in unsprayed sweet corn. (E.R. Mitchell).

FALL ARMYWORM (*Spodoptera frugiperda*) - FLORIDA - District> County= status: C> St. Johns= populations increased, heaviest of season at Hastings, averaged

27 males per trap. (R.B. Workman). Alachua= 3rd instar fall armyworm larval infestations on treated and untreated corn light and spotty; populations increased, pheromone trap catches up to 8 per night at Alachua. (E.R. Mitchell).

MISSISSIPPI - Fall armyworm damage noneconomic in all fields. Surveys May 25 and May 30 on corn (R.E. Anderson, D.B. Hogg):

District> County	Instar	Larvae per 30.5 row m	Host height (cm)
NC> Marshall		0	30-46
NC> Lafayette		0	25-36
NE> Union		0	25-46
NE> Lee	2nd to 6th	0.4	30-61
EC> Clay	2nd to 3rd	1.3	15-30
EC> Oktibbeha	3rd to 5th	0.3	15-25
EC> Winston	5th to 6th	0.1	76-91
EC> Neshoba	5th to 6th	0.1	152-182
SE & Coastal> Newton		0	151-182
SE & Coastal> Jones	2nd to 6th	0.3	61-101
SC> Smith	2nd to 6th	0.1	61-91
SC> Covington	2nd to 5th	0.7	61-101
C> Attala		0	91-121

ARMYWORM (*Pseudaletia unipuncta*) - NORTH CAROLINA - Defoliation light to severe in no-till corn planted in rye cover crop. District> County= status: Northern Piedmont> Guilford, Northern Mountain> Wilkes, Southern Piedmont> Montgomery, and Central Piedmont> Wake= damage and at least 1 larva per plant in 75% of plants observed. Wilkes= samples in 6.1-ha field showed 70% of plants infested; to date, 15 damaged fields reported. (M. Miller et al.).

KENTUCKY - District> County= armyworm status on corn: Midwestern> Christian= larval damage noticeable in 5 (74.9 ha) of 34 fields (728.4 ha). Plants showing feeding averaged 15% in these fields, damage severe enough in 2 fields to require treatment. No problems in surrounding counties or farther north. (P.E. Sloderbeck et al.).

MARYLAND - First armyworm larvae of season. District> County= status on no-till corn: NC> Queen Annes= noted near Centreville, May 15. Damage not expected until May 21-27 on the shore. Adult catches decreased rapidly May 9-15. (J.L. Hellman).

DINGY CUTWORM (*Feltia ducens*) - IOWA - District> County= status on corn: C> Boone, SW> Adair, SE> Louisa and Wapello, and EC> Linn= fed on leaves on up to 50% of plants in some fields. Few treatments needed. Most problems on corn following soybeans. (L.H. Townsend).

BEET ARMYWORM (*Spodoptera exigua*) - FLORIDA - District> County= status: C> Alachua= larvae on Amaranthus sp. (a weed) and adults averaged 25-30 per night per trap at Alachua. (E.R. Mitchell).

COFFEE BEAN WEEVIL (*Araecerus fasciculatus*) - FLORIDA - District> County= status on corn: S> Dade= adults lightly infested 8.1 ha of seed corn at Homestead and emerged from corn left standing in field after harvest. (P. Chobrda).

SEEDCORN MAGGOT (*Hylemya platura*) - IOWA - First of season. District> County= status on corn: WC> Calhoun= damage light in 1 field. (J.C. Creswell).

SMALL GRAINS

DISEASES

WHEAT LEAF RUST (Puccinia recondita f.sp. tritici) - KANSAS - Prevalence much lighter in northeast corner of State than last week in north-central area. District> County= status on wheat: NE> Brown, Jackson, Nemaha, Doniphan, Atchison, and Jefferson= of fields surveyed, infection trace in only 1 field in first county. (T. Sim, IV).

CEPHALOSPORIUM STRIPE (Cephalosporium gramineum) - KANSAS - Continued to appear in scattered fields. District> County= status on wheat: NE> Jackson and Brown and EC> Linn= trace in 1 field each. (T. Sim, IV).

WHEAT POWDERY MILDEW (Erysiphe graminis f.sp. tritici) - KANSAS - Still one of most prevalent diseases in most wheat fields statewide. Prevalence ranged from trace to 100%, severities varied widely from field to field. Area> status on wheat: SE> affected heads in some parts. (T. Sim, IV). WISCONSIN - District> County= status on winter wheat: SC> Jefferson and Rock and SE> Waukesha, Walworth, Racine, and Kenosha= rapid development occurred, 100% of plants infected with up to 50% severity in some fields [boot]; caused death to most of lower leaves. (O.L. Lovett).

WHEAT STRIPE RUST (Puccinia striiformis) - KANSAS - First of season. Usually not seen in State except when spring temperatures stay cool. District> County= status on wheat: EC> Douglas= seemed limited to about 9 sq m area in 1 field, nearly all plants in that area infected. (T. Sim, IV).

TAN SPOT (Pyrenophora trichostoma) - KANSAS - Still one of most prevalent diseases in most wheat fields statewide. Prevalence ranged from trace to 100%, severities varied widely from field to field. District> County= status on wheat: SE> Neosho= destroyed flag leaves in 1 field. (T. Sim, IV).

SPECKLED LEAF BLOTCH (Septoria tritici) - KANSAS - Still one of most prevalent diseases in most wheat fields statewide. Prevalence ranged from trace to 100%, severities varied widely from field to field. (T. Sim, IV).

TAKE-ALL (Gaeumannomyces graminis var. tritici) - KANSAS - District> County= status on wheat: EC> Douglas= reported in 1 field. (T. Sim, IV).

BARLEY STRIPE (Pyrenophora (Drechslera) graminea) - KANSAS - District> County= status on barley: SE> Neosho= observed in 1 field. (T. Sim, IV).

RHYNCHOSPORIUM SCALD (Rhynchosporium secalis) - KANSAS - District> County= status on barley: SE> Neosho= affected most of plants in 1 field. (T. Sim, IV).

SHARP EYESPOT (Rhizoctonia solani) - OKLAHOMA - District> County= prevalence on 'Triumph' wheat April 24 to May 25: C> Logan= 62%. (K.E. Conway).

BASAL GLUME ROT (Pseudomonas atrofaciens) - KANSAS - First of season. District> County= status on wheat: EC> Osage= trace in 1 field and SE> Neosho= reported in 1 field. (T. Sim, IV).

HALO BLIGHT (Pseudomonas coronafaciens) - WISCONSIN - District> County= status on oats: SC> Rock= Leaf symptoms developed in localized areas of 2 oat [20 cm tall] fields. Bacteria carried on seed, may be more severe where seed saved for 1980 crop. (O.L. Lovett).

BLACK CHAFF (*Xanthomonas translucens* f.sp. *undulosa*) - KANSAS - First of season. District> County= status on wheat: NE> Doniphan= infected about 80% of plants in 1 field. EC> Anderson and SE> Neosho= infection reported. (T. Sim, IV).

BARLEY YELLOW DWARF VIRUS - KANSAS - District> County= status on wheat: EC> Osage= trace in 1 wheat field and SE> Neosho= observed in barley field and in oat field. (T. Sim, IV).

INSECTS

ARMYWORM (*Pseudaletia unipuncta*) - TENNESSEE - District> County= counts per 0.09 sq m: Delta> Obion and Dyers= up to 13, heavy damage continued. (R. Patrick, R. Miller). KENTUCKY - District> County= status on small grains: Midwestern> Christian= still serious problem, larvae averaged 8 per 0.4 sq m in 45 fields (1,012 ha); treatment recommended in 15 fields (344 ha). Logan and Todd= several fields near economic levels. Henderson= first larvae noted and Union= no larvae seen. (P.E. Sloderbeck). VIRGINIA - Heavy damage to small grains continued. District> County= status on small grains: C> Fluvanna and Appomattox and W> Augusta= damage severe. (J.L. Garner).

SAY STINK BUG (*Chlorochroa sayi*) - NEW MEXICO - District> County= status on barley: SE> Dona Ana= mostly this species, with some CONCHUELA (*Chlorochroa ligata*), ranged up to 10 per sweep in northern area, populations heaviest north of Hatch. (Durkin).

TURF, PASTURES, RANGELAND

DISEASES

TURF BROWN PATCH (*Rhizoctonia solani*) - KANSAS - Warm humid conditions enhanced activity. Area> status on turf: NE> noted in lawns over wide area. (T. Sim, IV).

INSECTS

BROWN WHEAT MITE (*Petrobia latens*) - UTAH - District> County= status: N> Morgan= heavy on planted range crested wheatgrass and other grasses in Porterville area. (G.F. Knowlton, B.A. Haws).

FORAGE LEGUMES

DISEASES

SPRING BLACK STEM (*Phoma medicaginis*) - KANSAS - Continued to affect remaining first alfalfa cutting statewide. Defoliation (indicated by asterisks) in western one-third of State. Also affected second cutting in parts of eastern area. (T. Sim, IV).

<u>District> County</u>	<u>Prevalence (%)</u>	<u>Severity</u>	<u>Host height (cm)</u>
NE> Pottawatomie*	100	light	61
NE> Jackson	100	light	61
NE> Brown*	100	light	61
EC> Miami	100	light	8
SW> Finney	100	light	61
SW> Kearny*	100	light	61

LEPTO LEAF SPOT (Leptosphaerulina briosiana) - KANSAS - District> County= status on alfalfa: NE> Brown= trace in 1 field. (T. Sim, IV).

YELLOW LEAF BLOTCH (Pseudopeziza jonesii) - KANSAS - District> County= status on alfalfa [61 cm tall]: NE> Jackson= trace in 1 field. (T. Sim, IV).

COMMON LEAF SPOT (Pseudopeziza medicaginis) - KANSAS - District> County= status on alfalfa: NE> Brown= trace in 1 field. (T. Sim, IV).

ALFALFA DOWNTY MILDEW (Peronospora trifoliorum) - KANSAS - District> County= status on alfalfa [61 cm tall]: NE> Jackson= trace in 1 field. (T. Sim, IV). OKLAHOMA - District> County= prevalence on 'Kanza' irrigated alfalfa April 24 to May 25: Panhandle> Beaver= 50-70% in 97.1 ha. (K.E. Conway).

A LESION NEMATODE (Pratylenchus sp.) - OKLAHOMA - District> County= counts per 100 ml of alfalfa soil April 24 to May 25: SW> Tillman= this species, a STUNT NEMATODE (Tylenchorhynchus sp.), and a PIN NEMATODE (Paratylenchus sp.) 200, 72, and 12, respectively. (K.E. Conway).

INSECTS

ALFALFA WEEVIL (Hypera postica) - NEW MEXICO - District> County= larvae and adults per 25 sweeps of alfalfa: NW> Sandoval= 30-300+ and 2-5 in Corrales area (C. Heninger); SE> Chaves= 0 and 5 in Roswell area and 0 and 2-3 in Dexter and Hagerman areas and Eddy= 0 and 4-15 in Cottonwood area; adults decreased in most fields but ranged 3-7 per 0.09 sq m on 121 ha (L. Gholson). Populations seem lighter in second crop than in uncut first crop. (T. Riddle).

IOWA - District> County= alfalfa weevil status on alfalfa: NE> Clayton= eggs 3, 107, and 138 per 0.09 sq m sample, 1st through 4th instar larvae 6-10, and adults 1 per sweep in 3 fields; about 15% tip feeding. Alamakee= eggs 41 and 21 per 0.09 sq m in 2 fields; about 10-15% tip feeding. SC> Decatur= 1st through 3rd instar larvae present; about 10% tip feeding in 2 fields. (J.R. DeWitt).

WISCONSIN - Area> alfalfa weevil status on alfalfa: SE, SC, and SW> tip feeding up to 100%, harvest and chemical treatment underway for larval control. High rates of tip feeding in areas with lighter soils in many cases. C> tip feeding 3-100% and a number of unhatched eggs in alfalfa stems. District> County= status: EC> Outagamie, Winnebago, and Fond du Lac= tip feeding lighter, unhatched eggs moderate in stems. WC> La Crosse and Trempealeau= tip feeding noted and St. Croix= 3% tip feeding. EC> Door= larvae 0, adults 1 per sweep. NC> Marathon= eggs 0 and adults few. SW> Sauk= small larvae in stubble 5 days after first crop harvested in Spring Green area, indicate weevils hatched after harvest, fields cut early to control larval damage should be checked for feeding and regrowth. SC> Dane= 36 larvae in Berlese funnel extraction of 30 alfalfa stems [one-half hard bud] from southern fields, 19% first instar, 53% 2nd instar, 25% 3rd instar, and 3% 4th instar (large and most destructive). District> County= degree-day accumulations (base 8.9°C) March 1 to May 30: SC> Dane= 272 at Madison; SE> Washington= 239 at Hartford; EC> Outagamie= 208 at Appleton; and WC> Dunn= 233 at Menomonie. (O.L. Lovett).

INDIANA - Production of alfalfa weevil adults seemed good even in fields where weevils affected by disease. Adults 4-8 per sweep in daylight when temperature near 27°C in 1 southwestern field; treated but probably too late. Apparently much pupation occurred prior to cutting, pupae sheltered from temperature extremes that occur in harvested field. (R. Meyer).

MARYLAND - Area> alfalfa weevil status on alfalfa week ending May 25: State-wide> adults emerged in all areas and C> stubble control should be applied to about 5% of plants due to heavy adult populations and early cutting. (J.L. Hellman).

ALFALFA CATERPILLAR (*Colias eurytheme*) - ARIZONA - District> County= status on alfalfa: C> Maricopa= adults 20 per 20 sweeps and Pinal= Larvae 27 per 100 sweeps and adults 3-4 per 10 sweeps. (L.G. Blackledge et al.). NEW MEXICO - District> County= counts per 25 sweeps of alfalfa: SE> Chaves= 4 early instars in Roswell area. (T. Riddle).

ALFALFA BLOTH LEAFMINER (*Agromyza frontella*) - NEW HAMPSHIRE - Area> status on alfalfa: SE> adults active, egg laying expected during next week. (J.F. Burger).

SPOTTED ALFALFA APHID (*Therioaphis maculata*) - UTAH - District> County= status on forage legumes: C> Millard= appeared in Delta area fields unusually early, before May 18; damage expected. (L. Haskell, J.B. Karren).

PEA APHID (*Acyrthosiphon pisum*) - UTAH - District> County= status on forage legumes: N> Cache= population heavy in south end of Cache Valley, lighter elsewhere (D.W. Davis, L. Jech) and C> Millard= moderate. (L. Haskell, J.B. Karren).

BLUE ALFALFA APHID (*Acyrthosiphon kondoi*) - OKLAHOMA - New county records. District> County= status on alfalfa: EC> Muskogee= light at Muskogee, May 12, 1979. Collected by B.G. Hill. Determined by D.C. Arnold. C> Seminole= at Little Okfuskee= at Bearden, May 23, 1979. Collected and determined by R.C. Berberet. (D.C. Arnold).

LYGUS BUGS (*Lygus spp.*) - ARIZONA - District> County= nymphs and adults on alfalfa: C> Maricopa= 30-60 and 50-230 and Pinal= 24-784 and 48-472 per 100 sweeps; and SW> Yuma= 20 and 2-60 per 20 sweeps. (L.G. Blackledge et al.).

GRASSHOPPERS - WISCONSIN - District> County= status on alfalfa: SW> Sauk and Richland and C> Marquette and Waushara= 1st instar Melanoplus sp. nymphs fed on tips. (O.L. Lovett).

SOYBEANS

INSECTS

MEXICAN BEAN BEETLE (*Epilachna varivestis*) - INDIANA - First egg mass of season. District> County= status: SE> Jennings= on soybeans, May 30. (C.R. Edwards).

GRASSHOPPERS - NORTH CAROLINA - District> County= status on soybeans: Northern Coastal> Nash= damage from nymphs noted along field margins, defoliation 30% in rows bordering grass strips and road shoulders; and Southern Coastal> Sampson and Central Coastal> Johnston= infestations similar to above along road shoulders. (M. Bowden, T. Hunt).

PEANUTS

INSECTS

REDNECKED PEANUTWORM (Stegasta bosqueella) - FLORIDA - District> County= larvae on peanuts: NW> Jackson= scarce at Greenwood, not likely to build up until July. (W.B. Tappan).

TOBACCO THIRIPS (Frankliniella fusca) - FLORIDA - District> County= status on peanuts [bud]: NW> Jackson= population decreased (expected) at Greenwood. Averaged 31.6 per bud, May 21 and decreased to 15.7 per bud May 28. (W.B. Tappan).

COTTON

INSECTS

BOLL WEEVIL (Anthonomus grandis grandis) - OKLAHOMA - First adults of season. District> County= counts in number of pheromone traps week ending May 25: SW> Kiowa= 2 in 29, Jackson= 1 in 85, and Harmon= 1 in 30. (D.C. Arnold).

TOBACCO

DISEASES

BLUE MOLD (Peronospora tabacina) - FLORIDA - District> County= status on tobacco plants: NE> Suwannee= controlled by fungicide at Live Oak. (W.B. Tappan).

POTATO VIRUS Y - FLORIDA - District> County= status on tobacco: NE> Suwannee= prevalence increased on treated and untreated plots at Live Oak. (W.B. Tappan).

INSECTS

TOBACCO BUDWORM (Heliothis virescens) - FLORIDA - District> County= status on tobacco: NE> Suwannee= damaged 30% of plants at Live Oak, increased from 27% of previous 2 weeks. (W.B. Tappan). NORTH CAROLINA - District> County= number of tobacco fields (f) above threshold level (10% infestation), heaviest infestation (%), and average infestation (%): Southern Coastal> Bladen= 62 of 213f (about 340 ha), 20%, and 6% in fields; Central Coastal> Lenoir= 87 of 325f, 40%, and 8%; Northern Coastal> Martin= 10 of 47f (111 ha), 28%, and 8%; and Northern Piedmont> Granville= 2 of 151f (182 ha), 14%, and only 1% in fields. Wet weather delayed treatment. (T.N. Hunt).

TOBACCO HORNWORM (Manduca sexta) - FLORIDA - District> County= status on tobacco: NE> Suwannee= damage decreased at Live Oak during last 2 weeks, from about 11% of plants showing damage to 7%, May 30. (W.B. Tappan).

GREEN PEACH APHID (Myzus persicae) - FLORIDA - District> County= status on tobacco: NE> Suwannee= increased considerably during last 2 weeks, averaged 8 per plant 2 weeks ago compared to 40 per plant May 30. (W.B. Tappan). NORTH CAROLINA - Increased slowly on tobacco in Coastal Plain. District> County= status on tobacco: Central Coastal> Lenoir= 2 of 325 fields above threshold level. Infestations averaged 2-3%, heaviest 28%; and Northern Coastal> Martin= infestation averaged less than 5% in fields, heaviest 10%. (T.N. Hunt).

POTATOES, TOMATOES, PEPPERS 5

DISEASES

A SPIRAL NEMATODE (Helicotylenchus sp.) - OKLAHOMA - District> County= counts per 100 ml of soil from tomato and squash in garden April 24 to May 25: EC> Hughes= this species and a STUNT NEMATODE (Tylenchorhynchus sp.) 24 and 12, respectively. (K.E. Conway).

BEANS AND PEAS

INSECTS

PEA LEAF WEEVIL (Sitona lineatus) - IDAHO - District> County= status on emerging peas: N> Latah in Genesee, Kendrick, Potlatch, and Troy areas and Nez Perce and Clearwater in Southwick, Cavendish, and Leland areas= ranged 0.3-2, caused serious damage in some fields. (L.E. O'Keeffe).

COLE CROPS

INSECTS

CABBAGE LOOPER (Trichoplusia ni) - FLORIDA - District> County= eggs on collards: C> St. Johns= averaged 50 per plant at Hastings, high egg mortality expected. (R.B. Workman).

IMPORTED CABBAGEWORM (Pieris rapae) - FLORIDA - District> County= status on collards: C> St. Johns= light, no threat at Hastings. Eggs averaged 70 per plant, fairly high mortality expected due to predators, parasites, and weather. Adults averaged about 500 per 0.4 ha in cole crop area. (R.B. Workman).

CABBAGE SEEDPOD WEEVIL (Ceutorhynchus assimilis) - IDAHO - District> County= counts per sweep on treated and untreated rape: N> Nez Perce, Lewis, Clearwater, Idaho, and Latah= 5-50, eggs laid but no larvae noted. (L.E. O'Keeffe).

CABBAGE APHID (Brevicoryne brassicae) - IDAHO - District> County= status in winter rape field: N> Nez Perce near Lapwai and Latah at Troy= heavy in spotted areas in field. (L.E. O'Keeffe, H.W. Homan).

CUCURBITS

DISEASES

A SPIRAL NEMATODE (Helicotylenchus sp.) - OKLAHOMA - See POTATOES, TOMATOES, PEPPERS above.

INSECTS

A LEAFMINER FLY (Liriomyza sp.) - ARIZONA - District> County= mines per leaf of cantaloupe: SW> Yuma= 20-30 in older leaves near crown in Gila Valley. (C. Berens).

DECIDUOUS FRUITS AND NUTS

DISEASES

APPLE SCAB (*Venturia inaequalis*) - NEW HAMPSHIRE - Area> status on apple trees: S> infection very heavy May 15-21. Cool, wet conditions ideal for spread of ascospores and germination on host trees. Controls not applied due to rain, substantial problems expected if wet weather continues. (G.T. Fisher).

CEDAR-APPLE RUST (*Gymnosporangium juniperi-virginianae*) - KANSAS - District> County= status on apple: SE> Crawford= active. (T. Sim, IV).

INSECTS

COLDING MOTH (*Laspeyresia pomonella*) - WISCONSIN - First adult of season. District> County= status: SW> Crawford= taken in pheromone trap and SE> Waukesha and SC> Dane= none trapped. (O.L. Lovett).

FRUITTREE LEAFROLLER (*Archips argyrospilus*) - NEVADA - District> County= status on apple trees: W> Washoe= larvae moderate to heavy on home garden trees in southern area. (E. Pritchard et al.).

EASTERN TENT CATERPILLAR (*Malacosoma americanum*) - KENTUCKY - First adults of season. District> County= status: Bluegrass> Fayette= in light trap, May 22. (P.E. Sloderbeck).

GREEN PEACH APHID (*Myzus persicae*) - MARYLAND - Area> status on apples week ending May 25: Statewide> moderate to very heavy, additional controls applied to 283-405 ha past 10 days. (J.L. Hellman).

PECAN NUT CASEBEARER (*Acrobasis nuxvorella*) - NEW MEXICO - District> County= status: SE> Eddy= egg laying began week of May 25 in Carlsbad area, some parasitism observed. (T. Riddle). OKLAHOMA - First eggs of season. District> County= status on pecan: SC> Jefferson= in Ringling area, May 23. Few additional eggs found in southern edge of State week ending May 25. (D.C. Arnold).

ORNAMENTALS

INSECTS

BAGWORM (*Thyridopteryx ephemeraeformis*) - OKLAHOMA - First of season. District> County= small larvae on pecan leaves: SC> Jefferson= week ending May 25. (D.C. Arnold).

DOGWOOD BORER (*Synanthedon scitula*) - KENTUCKY - First adult of season. District> County= in pheromone trap: Bluegrass> Fayette= May 20. (D.A. Potter).

LATANIA SCALE (*Hemiberlesia lataniae*) - CALIFORNIA - District> County= status: Central Coast> Alameda= heavy infestation, 50 (all stages) per branch of Pyracantha sp. (C.S. Papp).

FOREST AND SHADE TREES

INSECTS

ELM LEAF BEETLE (Pyrrhalta luteola) - NEVADA - District> County= status: W> Washoe= 1st instar larvae in Reno and Sparks areas. (R.C. Bechtel).

MOURNINGCLOAK BUTTERFLY (Nymphalis antiopa) - NEVADA - District> County= larval status on elm and willow: W> Independent city of Carson City, Churchill at Fallon, and Washoe in Reno and Sparks areas= light to moderate. (R.C. Bechtel). DELAWARE - District> County= status on willow: N> New Castle= larvae common on trees. (P.P. Burbutis).

SPRING CANKERWORM (Paleacrita vernata) - IOWA - Status: Infestation and damage indicated heavier than during past several years. (D.R. Lewis).

BUCK MOTH (Hemileuca maia) - VIRGINIA - District> County= status on oak: W> Rockbridge and SW> Scott= feeding damage heavy. (J.L. Garner).

PERIODICAL CICADA (Magicicada septendecim) - VIRGINIA - First egg laying of season. District> County= status: C> Fluvanna= adults heavy and females laying eggs, May 27. (J.L. Garner).

AN APHID (Prociphilus fraxinifolii) - CALIFORNIA - District> County= status on ash: Sacramento Valley> Glenn= heavy, averaged 20 per leaf. (C.S. Papp).

ASH PLANT BUG (Tropidosteptes amoenus) - WISCONSIN - District> County= status on ash: SC> Dane= more damage reported, small amount of leaf drop noted. (O.L. Lovett).

SPRUCE BUDWORM (Choristoneura fumiferana) - NEW HAMPSHIRE - County= status: Coos= preliminary survey of previously reported heavily infested areas at Pittsburg, Stewartstown, and Colebrook showed good current terminal bud development and only moderate infestation levels in most areas. Larvae 65-80% in 3rd instar and still inside terminal buds in areas near northern border at Pittsburg. Farther south at Pittsburg, 78% in 4th instar and 21% in 5th instar, at Colebrook 90% in 5th and 6th instar. Only heavily infested area along State Highway 145 in old spruce stand. (Burger, LaScala).

COOLEY SPRUCE GALL ADELgid (Adelges cooleyi) - COLORADO - District> County= status on spruce: N> Larimer= newly formed galls heavy on trees in Ft. Collins area. (R.L. Phillips).

MAN AND ANIMALS

INSECTS

HORN FLY (Haematobia irritans) - FLORIDA - Decrease believed due to cool weather. District> County= average per head on small beef herd: C> Alachua= 244 at Newberry. (D. Boyd). WISCONSIN - Moderate to cool conditions delayed development. District> County= counts per side of beef cattle: WC> Pepin= about 6. (O.L. Lovett).

FACE FLY (Musca autumnalis) - WISCONSIN - Moderate to cool conditions delayed development. District> County= counts per head of beef cattle: WC> Pepin= 1. (O.L. Lovett).

MOSQUITOES - NEW MEXICO - District> County= status: NW> Sandoval= Aedes vexans very heavy during day and Culex tarsalis heavy in evenings in Corrales area. (C. Heninger). WISCONSIN - Area> status: Statewide> annoyance severe in several areas as far north as NE> Oconto County, worst biting confined to area of wet or flooded woodlands. District> County= status: SW> Sauk= A. vexans most prominent biter along Wisconsin River. (O.L. Lovett).

BENEFICIAL ORGANISMS & THEIR ENEMIES

INSECTS

ALFALFA LEAFCUTTING BEE (Megachile rotundata) - IDAHO - First emergence of season. District> County= status: SW> Owyhee= observed May 24 near Marsing under natural conditions. (N.D. Waters).

A SAPYRID WASP (Sapyga pumila) - IDAHO - First emergence of season. District> County= status: SW> Owyhee= noted May 25 near Marsing, parasite of ALFALFA LEAFCUTTING BEE (Megachile rotundata). (N.D. Waters).

A MYMARID WASP (Anaphes flavipes) - District> County= recoveries of 20% parasitism of Oulema melanopus (cereal leaf beetle) eggs from individual oat fields May 18-22: KENTUCKY - E> Lewis= 50% near Tollesboro; PENNSYLVANIA - C> Blair= 67% in North Woodbury Township; and NEW JERSEY - N> Warren= 29% in Franklin Township. (T.L. Burger).

FEDERAL AND STATE PROGRAMS

INSECTS

CEREAL LEAF BEETLE (Oulema melanopus) - VIRGINIA - District> County= status on spring oats: C> Cumberland= damage widespread, May 25 (J.L. Garner). MARYLAND - Area> status week ending May 25: C> egg laying continued in all areas, some flag leaf damage (10-15%) on about 800 ha and NC district> Carroll County= heaviest counts on oats ranged 2-6 larvae per leaf and Baltimore, Montgomery, and Carroll Counties= damage to wheat expected to increase next 10 days. (J.L. Hellman).

GRASS BUGS - UTAH - District> County= status on range grasses: C> Utah= Labops hesperius observed mating in Diamond Fork Canyon, few still in 5th nymphal instar and N> Morgan= L. hesperius ranged 0-100+ per sweep on planted range grasses in Portersville area; mating, some gravid females, and 4th and 5th instar nymphs noted. Ranged 20-100+ per sweep at East Canyon Reservoir, several hundred acres conspicuously discolored by feeding. Irbisia spp. ranged 0-1 per sweep, mostly mature, on planted range grasses in Portersville area. (G.F. Knowlton et al.). IDAHO - District> County= late instar nymphs per sweep (average) in bluegrass field: N> Latah= Irbisia pacifica 30 near Moscow. (L.P. Kish, H.W. Homan).

GRASSHOPPERS - CALIFORNIA - District> County= status of Oedaleonotus enigma enigma: Southern California> Los Angeles= moved in great masses in Lancaster area, in eastward direction. Terrain west from city literally covered with infestation. Alfalfa fields decimated west of town, as pest moves eastward, potential hazard exists for area fields. (C.S. Papp). NEVADA - Status: W> Humboldt= 1st to 3rd instar nymphs of 90% CLEARWINGED GRASSHOPPER (Camnula pellucida) and 10% MIGRATORY GRASSHOPPER (Melanoplus sanguinipes) ranged 10-300 per 0.8 sq m on 80.9 ha of native hay meadow at Rock Creek. Hatch not complete. (R. Rowe).

UTAH - District> County= grasshopper status in range areas: N> Cache and Morgan and E> Summit= hatched, mostly 1st and 2nd instar nymphs. (G.F. Knowlton). NEW MEXICO - District> County= Schistocerca sp. and Melanoplus differentialis status: SE> Eddy= 2nd and 3rd instar nymphs averaged 70+ per 0.8 sq m, fed on weeds in river bottom area in southeastern Artesia. (M. Perry).

GYPSY MOTH (Lymantria dispar) - WISCONSIN - District> County= status: SE> Waukesha= second application of a virus formulation made in infested area near Oconomowoc, additional control using a pheromone planned in few weeks. (O.L. Lovett).

PINK BOLLWORM (Pectinophora gossypiella) - ARIZONA - District> County= pheromone trap catches: C> Maricopa= 0-20 per trap per day and SW> Yuma= 8, 57, 8, and 4 from 4 traps May 21-30 at experiment station. (L.G. Blackledge et al.).

RANGE CATERPILLAR (Hemileuca oliviae) - NEW MEXICO - District> County= status on rangeland: NE> Colfax and Union= hatch began. (Durkin, Graham).

SCREWWORM (Cochliomyia hominivorax) - Total of 5 cases reported from continental United States May 6-12 as follows: New Mexico 3 and Arizona 2. Total of 470 cases confirmed in portion of eradication zone in Republic of Mexico April 22 to May 12. Total of 431 cases reported in Mexico south of eradication zone. Number of sterile flies released May 6-12 totaled 45,573,015 as follows: Texas 27,341,015; New Mexico 3,588,000; Arizona 13,336,000; California 1,308,000. Total of 90,892,622 sterile flies released within eradication zone of Mexico. (J.E. Novy, M.E. Meadows).

DETECTION

NEW COUNTY RECORDS

INSECTS

BLUE ALFALFA APHID (Acyrtosiphon kondoi) - OKLAHOMA - Muskogee, Seminole, and Okfuskee. (p. 356).

AN ERIOPHYID MITE (Eriophyes solipini) - CALIFORNIA - District> County= status: Sacramento Valley> Colusa= collected on Distichlis spicata (seashore saltgrass) along roadside at Stonyford, April 8, 1979, by T. Kono and P. Crane. Determined by T. Kono and H.H. Keifer. (C.S. Papp).

LIGHT TRAP COLLECTIONS

Temperature (°C.)	Precipitation (mm.)	Trap Type	Collection Date	Location	Crops	
					BL	MV
ARIZONA						
Mesa	5/21-27	BL	2			
CALIFORNIA						
Bellota	5/28	BL	1			
Manteca	5/28	BL	12-30			
FLORIDA						
Gainesville	5/24-30	BL	1			
INDIANA (Counties)						
Lagrange	5/24-30	BL	0			
Tipppecanoe	5/24-30	BL	0			
FAYETTE	5/23-30	BL	0			
KENTUCKY (Counties)						
Caldwell	5/23-30	BL	0			
Fayette	5/23-30	BL	0			
MISSOURI						
St. Louis	5/24-30	BL	0			
MINNESOTA						
Fergus Falls	5/26-29	BL	4			
Le Sueur	5/26-29	BL	0			
MISSISSIPPI						
Stoneville	5/18-24	2BL	30	1	6	11
MINNESOTA						
Fergus Falls	5/26-29	BL	2		1	2
LE SUEUR	5/26-29	BL	0		2	2
MISSISSIPPI						
Stoneville	5/18-24	2BL	30	1	198	2
TEXAS						
College Station	5/10-14	BL	1			
SWISHER COUNTY	5/5-10	BL	10	3		
WISCONSIN						
Lancaster	5/24-30	BL	0		0	1
Mazomanie	5/24-30	BL	0		3	0

Pest Interceptions of Quarantine Significance at Ports of Entry

Plant Importation and Technical Support Staff
Plant Protection and Quarantine Programs, USDA

	<u>Life Stage</u>	<u>Host</u>	<u>Probable Origin</u>	<u>Port of Entry</u>	<u>Desti-nation</u>
<u><i>Ceratitis capitata</i> (Wiedemann)</u> Mediterranean fruit fly Det. J. Dooley	larval	in mangoes from baggage	Guatemala	Los Angeles	CA
<u><i>Hydurgops palliatus</i> (Gyllenhal)</u> a scolytid beetle Det. J.M. Kingsolver	adult	in Dunnage	West Germany	Duluth	--
<u><i>Lasioptera arundinis</i> Schiner</u> a cecidomyiid midge Det. R.J. Gagné	larval	in reed mats from cargo	Hungary	Houston	TX
<u><i>Orchamoplatus mammaefferus</i> (Q & B)</u> a whitefly Det. R.K. Kunishi	pupal	on leaves of <u><i>Codiaeum</i></u> from baggage	Hawaii	Honolulu	CA
<u><i>Pieris brassicae</i> (Linnaeus)</u> Large white butterfly Det. D.M. Weisman	puapl	on container	Spain	Jacksonville	FL
<u><i>Rhynchosites</i> sp.</u> a weevil	adult	in almonds from baggage	Italy	Kennedy Airport	NY
<u><i>Scolytus scolytus</i> (Fabricius)</u> a scolytid beetle Det. D.M. Anderson	larval adult	in wood crates from cargo	Spain	Philadelphia	--
<u><i>Cochlicella ventrosa</i> (Ferussac)</u> a helicid snail Det. R. Munkittrick	adult	on vans of military household goods	Greece	Houston	TX

METRIC CONVERSION

1 cm = 0.393701 in
1 m = 3.28084 ft = 1.09361 yd
1 km = 0.621371 mi
1 sq cm = 0.155000 sq in
1 sq m = 10.7639 sq ft = 1.19599 sq yd
1 ha = 2.47104 acres
1 sq km = 0.386101 sq mi
1 kg = 2.20462 lb
1 t (metric ton) = 1.10231 short ton
1 kg/ha = 0.892183 lb/acre
1 t/ha = 0.446091 ton/acre

UNITED STATES DEPARTMENT OF AGRICULTURE
Animal and Plant Health Inspection Service
Hyattsville, Maryland 20782

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Cooperative PLANT PEST REPORT

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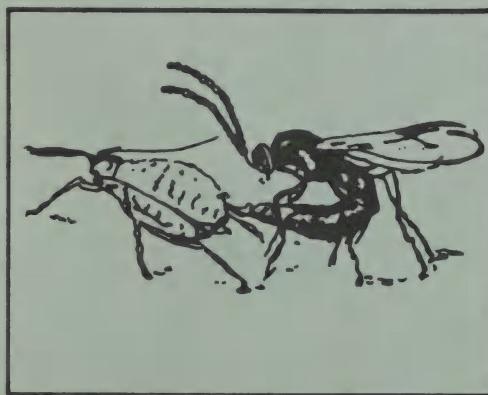
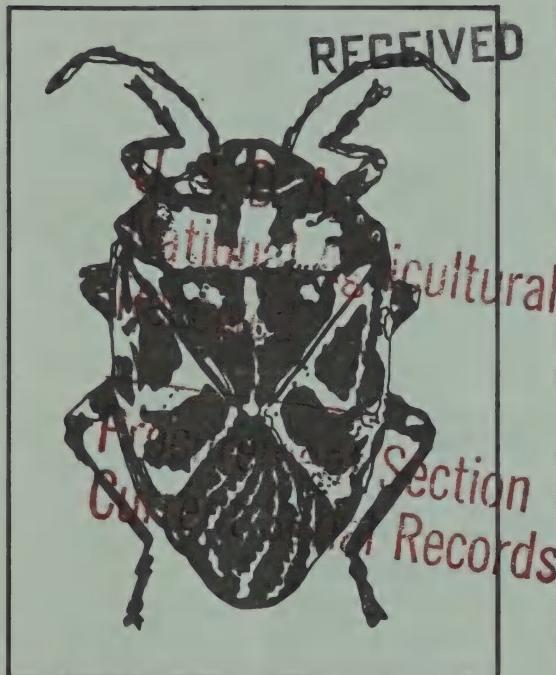
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Health
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JUN 27 1979



This publication is distributed weekly to Federal and State agencies, universities, farmers, and others interested in containing or controlling pests in the United States.

Data included in this publication are compiled from reports submitted by cooperating State, Federal and other agricultural and industrial specialists. Accuracy of the reports is not verified prior to publication.

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Correspondence should be directed to:

CPPR

New Pest Detection and Survey Staff
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Animal and Plant Health Inspection Service
U.S. Department of Agriculture
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Hyattsville, Maryland 20782

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COOPERATIVE PLANT PEST REPORT**HIGHLIGHTS**Current Conditions

ARMYWORM damage to corn in several eastern States. (p. 369).

Late instar FALL ARMYWORM larvae very early in North Carolina. (p. 370).

Maximum GREENBUG counts of 100 or more per sorghum plant in parts of central Kansas. Infestations early on corn and milo in southern Illinois. (p. 370-371).

ARMYWORM damage and treatments to wheat in parts of KANSAS. (p. 377).

CLOVER SCLEROTINIA WILT heaviest in years on alfalfa in Maryland. (p. 381).

A HYPOXYLON CANKER serious on oaks in southeastern parts of Oklahoma. (p. 387).

CEREAL LEAF BEETLE larvae heaviest since introduction into Maryland with damage expected to increase in 7-10 days. (p. 390).

GRASSHOPPER nymphs 30 or more per 0.8 sq m in parts of California, Washington, Kansas, and Nebraska. (p. 390-391).

Predictions

Potential for moderate losses to wheat due to WHEAT LEAF RUST in north-central Kansas. (p. 372).

Potential HESSIAN FLY damage to wheat in South Dakota heavier than in 1978. (p. 378).

Heavy ALFALFA LOOPER populations predicted for Washington. (p. 382).

Detection

A PYRALID MOTH is new for Hawaii. (p. 392).

For new county records see page 392.

Some First Occurrences of the Season

First EUROPEAN CORN BORER eggs in Kansas and adults in New York. STALK BORER in Ohio and Maryland. YELLOWSTRIPED ARMYWORM adults in Nebraska. WHEAT LEAF RUST in Wisconsin. OAT CROWN RUST in Kansas. PALE WESTERN CUTWORM in Montana. CHINCH BUG nymphs in Ohio. GREEN CLOVERWORM adult in Wisconsin. POTATO LEAFHOPPER in New York and Maryland. IMPORTED CABBAGEWORM, DIAMONDBACK MOTH, CORN EARWORM, and FALL ARMYWORM in New York. PEACHTREE BORER in Kansas. BLACK CHERRY FRUIT FLY in New York. WHITE PINE SAWFLY in Ohio. BLACK STEM RUST aecia in West Virginia and Wisconsin. JAPANESE BEETLE in New York.

Reports in this issue are for the week ending June 8 unless otherwise indicated.

CONTENTS

Corn, Sorghum, Sugarcane	
Diseases.....	367
Insects.....	367
Small Grains	
Diseases.....	372
Insects.....	377
Turf, Pastures, Rangeland	
Diseases.....	379
Insects.....	379
Forage Legumes	
Diseases.....	380
Insects.....	381
Soybeans	
Insects.....	383
Cotton	
Insects.....	383
Tobacco	
Insects.....	384
Sugar Beets	
Insects.....	384
Beneficial Organisms and Their Enemies	
Insects.....	388
Federal and State Programs	
Diseases.....	389
Insects.....	389
Hawaii Pest Report.....	392
Detection.....	392
Corrections.....	392
Light Trap Collections.....	393
Pest Interceptions of Quarantine Significance at Ports of Entry.....	394
Miscellaneous Field Crops	
Insects.....	385
Potatoes, Tomatoes, Peppers	
Insects.....	385
Beans and Peas	
Insects.....	385
Cole Crops	
Insects.....	385
General Vegetables	
Insects.....	386
Deciduous Fruits and Nuts	
Diseases.....	386
Insects.....	386
Small Fruits	
Insects.....	387
Forest and Shade Trees	
Diseases.....	387
Insects.....	387
Man and Animals	
Insects.....	388

CORN, SORGHUM, SUGARCANE

DISEASES

SOUTHERN RUST (Puccinia polysora) - INDIANA - New county records. District> County= collection data on corn: SW> Martin= taken at Huntingburg, determined by J.W. McCain, and Dubois= collected at South Martin, determined by J.F. Hennen and J.W. McCain. Both collected September 27, 1978, by R.A. Schall. (R.A. Schall).

FUSARIUM ROOT ROTs (Fusarium spp.) - KANSAS - District> County= status: SW> Finney, Gray, and C> McPherson= symptoms in several corn fields. (T. Sim, IV).

STEWART'S WILT (Erwinia stewartii) - See CORN FLEA BEETLE (Chaetocnema pulicaria), page 370.

INSECTS

EUROPEAN CORN BORER (Ostrinia nubilalis) - KANSAS - First of season. District> County= status: SC> Kiowa= fresh eggs on 15% and 2% of plants [61 cm tall] in 2 corn fields on June 5, and 0 in 2 other fields [8-15 cm tall]; SW> Ford= eggs on 15% of plants in 1 field (G.A. Salsbury); NE> Riley= trace in 1 corn field (R.J. Whiteworth); and SC and SW> adults increased sharply in blacklight trap sites (K.O. Bell, Jr.).

IOWA - District> County= European corn borer status on corn: SC> Ringgold= first adults in light trap at Beaconsfield night of May 30-31. (L.H. Townsend). MINNESOTA - Pupation reached in 3 southern districts. Adult emergence and egg laying expected to coincide with corn development if current warm spell continues. Adults very few in light traps. Corn height [8-15 cm]. (D. Sreenivasam). Degree-day accumulation (base 10°C) May 7 to June 3 (D. McGinnis):

District	Degree-days	District	Degree-days
NW	75.0	SW	143
WC	98.3	SC	148
C	87.2	SE	142
EC	95.0		

MISSISSIPPI - District> County= European corn borer larval counts on corn [host stage]: NE> Alcorn= 1+ per 0.3 row m [46-61 cm tall], and Tippah= 1+ per 2 row m [46-61 cm tall]; and NC> Lafayette= 1+ per 0.3 row m [31-46 cm tall]. Some controls applied. Populations decreased west and south from Alcorn County. Majority larvae, early instars, still feeding in whorl. (R. Anderson, D.B. Hogg). TENNESSEE - District> County= status on corn: Central Basin> Bedford= early instar larvae on midvein of leaves in 1 field. (M. Cooper).

ILLINOIS - European corn borer egg laying well underway in southern one-fourth of State. Very few corn fields tall enough to attract adults or support larval feeding. District> County= egg mass averages per plant and percent whorl feeding [host stage] in 1 field each: SW> Union= almost 1 and 50% [about 76 cm extended leaf height], and SE> Massac= 1+ (possibly up to 1.5) and 30% [about 60 cm extended leaf height]. NE> Boone= cornstalk dissection indicated 50+% pupation with little or no adult emergence, June 4. (K. Black).

WISCONSIN - District> County= European corn borer status on corn: SW> Sauk= egg bearing females caught near Spring Green last 2 weeks, no corn susceptible, eggs will be laid on alternate hosts such as potatoes or small grains; and SC> Dane= larvae 4%, pupae 72%, and empty pupal cases 24% in cornstalks near Oregon. First adult flight expected to peak at 351 degree-days (base 10°C), which may occur about June 15 if warm conditions persist; as far north as NC> Marathon and NE> Oconto= adults appeared in blacklight traps. Rains inadequate in many areas for corn. (O.L. Lovett).

INDIANA - District> County= European corn borer egg masses per 100 cornstalks [fifth collar] in border rows: C> Morgan= 1 and EC> Union= 2. Adults noted resting on smaller corn even in northern districts, no egg laying noted. District> County= heat unit accumulation (base 50°F) January 1 to June 7: NW> La Porte= 690 at Wanatah; WC> Tippecanoe= 698 at West Lafayette; NC> St. Joseph= 634 at South Bend; NE> Allen= 378 at Fort Wayne; C> Marion= 774 at Indianapolis; and SW> Vanderburgh= 932 at Evansville. (R.W. Meyer). OHIO - Adult flights increased from last period, see blacklight trap collections on page 395. (G.P. Walker).

NORTH CAROLINA - District> County= European corn borer status: Central Coastal> Wayne, Lenoir, and Johnston= scattered economic infestations. Samples from 5 problem corn fields averaged 15% plants infested, fields occur with 80% plants infested with multiple larvae. (T. Hunt). VIRGINIA - Damage serious. District> County= status on corn: E> King George, C> Bedford, and SE> Isle of Wight= larvae feeding. (J.L. Garner).

MARYLAND - European corn borer adult emergence about one-half of 1978 brood. Egg laying peaked when most corn plantings less than 20 cm tall, first brood expected to be well below normal. Cool, wet weather still slowing corn growth and planting (80-90% planted to date). (J.L. Hellman). NEW YORK - First adults active. District> County= adults in blacklight traps: W> Ontario= observed May 25. (Tebercherany). Status on corn: W> Ontario and Orleans= significant activity in blacklight traps, Monroe= eggs laid on sweet corn June 3 (Nally), and Niagara= eggs laid June 6 (Rutkowski) and adults in pheromone traps (H.R. Willson).

BLACK CUTWORM (*Agrotis ipsilon*) - KANSAS - Damage to corn in eastern area generally appeared to decrease as corn became larger and more larvae reached full growth. Activity on sorghum increased. District> County= status: NE> Doniphan and Brown= heavy week ending June 1 in some corn [seedling] (H.L. Brooks), Leavenworth= some damage continued in corn [seedling] and 30% of 1 sorghum [seedling] field replanted (L.C. Bonzckowski), Jackson= damaged about 10% of plants in 1 sorghum [5 cm tall] field on June 7 with damage continuing, Jefferson= damaged 8-16% of plants in 3 corn fields [13-30 cm tall], Atchison= damaged 15% in 1 field [10 cm], and Nemaha= damaged 14% in 1 field (B.D. Hilbert); SE> Neosho= some sorghum replanted due to damage (G.E. Lippert); and NC> Republic= damage to corn [10-20 cm tall] mostly old and usually very light but 16% of plants lost in 1 field with only 1-2% fresh cutting (K.O. Bell, Jr.).

KENTUCKY - Black cutworm larvae continued to damage corn fields in several areas of State. District> County= larval status: Midwestern> Christian= damage in 15 of 42 fields (344 of 890.3 ha), 4% of plants cut and 8 of the 15 fields (169 ha) above economic threshold (3% cut plants). Simpson= damage in 22 of 60 fields (279 of 842.6 ha), 3 fields above economic threshold. Union= damage above economic threshold in 66.8 ha of 1,343 ha surveyed; and Hardin= damage

above economic threshold in 2 of 28 fields (10 of 414.0 ha). Treatment not recommended since black cutworm larvae in 2 fields nearly full-grown and adequate stand still present. (P.E. Sloderbeck et al.).

ILLINOIS - Black cutworm damage still in occasional fields over most of State. With pupation of many larvae, activity in southern one-third of State should soon taper off. (K. Black). INDIANA - District> County= percent corn plants economically damaged by larvae in number of fields (f) (hectares): SW> Posey= 8+% in 2f (about 20 ha) (K. Klump); WC> Tippecanoe= 6+% in 1f (19 ha) by 4th to 6th instar (T. Turpin); and C> Morgan= about 2% in 1f (about 20 ha) (R.W. Meyer). OHIO - District> County= status on corn: SC> Brown= some damage in 3 fields, less than 1% in 2 conventional-till corn [mid-whorl] fields and 1-2% in 1 no-till corn [2-leaves] field in corn in 1978 (G.P. Walker); NC> Ashland= 1 field treated; and NE> Wayne= 2 fields treated had damage of about 5-6%; pupation expected to begin next week (S. Clement). MARYLAND - Populations well below normal, less than 0.5% damage in most heavily infested corn field. (J.L. Hellman).

ARMYWORM (*Pseudaletia unipuncta*) - TENNESSEE - District> County= status on corn: East Tennessee> Blount and Greene= infestations ranged up to 80 or 90% and fields are at treatable levels. Some fields have been treated. (G. Burgess). KENTUCKY - Larvae continued to damage corn fields at scattered locations throughout much of State. District> County= larval status: E> Wayne= damage severe in whorls of 1 no-till corn field; C> Hardin= damaged corn near grass waterway in 1 of 28 fields (about 0.4 of 414.0 ha); and Midwestern> Simpson= caused noticeable damage to 1 field out of 60 (842.6 ha) surveyed, larvae moved into corn from adjacent barley field, treatment recommended for border rows only, and Christian= no new infestations. (P.E. Sloderbeck et al.).

OHIO - District> County= armyworm status on corn: NC> Ashland= damaged 26% in 2-ha no-till corn [2 leaves] field in sod (B. Mead); C> Licking and NE> Wayne= treatments applied to 1 and 2 no-till corn fields, respectively, and damage reached economic levels in all 3 fields; and C> Licking= 2nd to 3rd instar larvae 3-4 per plant (S. Clement). VIRGINIA - District> County= status on corn: C> Bedford= damaging corn. (J.L. Garner). MARYLAND - Area> status on no-till corn: Statewide> damage spotty but heavy, damaged 50-60% of 1,619 ha. Controls applied. (J.L. Hellman).

STALK BORER (*Papaipema nebris*) - KENTUCKY - District> County= status: Midwestern> Christian= Tarval problem in no-till corn field, infested average of 80% of plants. (P.E. Sloderbeck et al.). IOWA - District> County= status on corn: EC> Iowa, SW> Cass and Pottawattamie, NE> Allamakee, SC> Madison, C> Dallas and Hardin= infestations reported. Some treatments or replanting necessary. (L.H. Townsend). ILLINOIS - Area> status on no-till corn: Mainly southern twothirds of State> several infestations noted. About 30% of corn severely damaged in at least 1 case. Some damage to conventionally tilled corn usually at field margins and not generally severe. (K. Black).

OHIO - First larvae of season. District> County= stalk borer on corn: NC> Ashland, NE> Wayne, and C> Licking= damage noneconomic, 1-4%, in 1 or 2 fields. Larvae 10 mm long and mostly concentrated in edge rows with some in center of fields. (S. Clement). MARYLAND - First infestation of season. District> County= status in no-till corn: NC> Baltimore, Montgomery, and Carroll= infested 324 ha, 30-70% infestation rates in most heavily damaged fields. Rye cover crops most heavily infested. No controls available. (J.L. Hellman).

FALL ARMYWORM (*Spodoptera frugiperda*) - MISSISSIPPI - Survey on corn in north-eastern area, asterisk indicates first of season (R. Anderson):

District> County	Instar	Numbers	Host height (cm)
NC> Marshall		0	30-46
NC> Marshall*	3rd to 4th	light	15-25
NC> Lafayette		0	46-61
NE> Tippah*	3rd to 6th	light	46-61
NE> Alcorn*	3rd to 6th	light	46-61
NE> Lee	3rd to 5th	light	61-91
EC> Monroe*	3rd to 6th	1 per 91.4 row m	15-30
EC> Clay	3rd to 6th	1 per 61.0 row m	15-46

NORTH CAROLINA - District> County= fall armyworm status: Northern Coastal> Washington= late instar larvae collected in corn field, very early for pest in State. Little damage to date. (J. Van Duyn). DELAWARE - District> County= status on young field corn: S> Sussex= larvae one-half to two-thirds grown common in southern area. (P.P. Burbutis).

YELLOWSTRIPED ARMYWORM (*Spodoptera ornithogalli*) - KANSAS - District> County= status: E area> occasionally found in small numbers on corn and sorghum, heaviest counts include 5% of sorghum plants in 1 field in EC> Douglas County (G.E. Hilbert) and 3% in 1 field in Anderson County (S.C. White). NEBRASKA - First adults of season. District> County= adults in blacklight trap: SE> Clay= taken May 30. (Peters).

DINGY CUTWORM (*Feltia ducens*) - IOWA - District> County= status on corn: District> County= WC> Harrison, SC> Ringgold (damage severe on 25 ha), NC> Hancock and Butler, WC> Calhoun and Woodbury, C> Boone and Story, SC> Union, and SW> Fremont (25 ha replanted)= damage reported. Dryness in some areas delayed treatments. (L.H. Townsend).

POTATO STEM BORER (*Hydroecia micacea*) - NEW YORK - New county records. District> County= collection data: C> Cayuga= early instar larvae collected from sweet corn and curly dock in Sterling area by C. Whiteman and H. Willson, and Oswego= early instar collected from curly dock roots in Oswego area by H. Willson, both collected June 1, 1979, and determined by H. Willson; W> Monroe= 2nd and 3rd instar larvae collected in field corn [10 cm tall] and curly dock, damage just becoming apparent. Similar damage occurred in 1978 in first county, earlier establishment possible. Widespread in first 2 areas. (H.R. Willson). WISCONSIN - District> County= damage to corn: SW> Richland= occurred again in corn [seedling] at 1 site, and SC> Rock= stand reduction about 1% in 1 site. (O.L. Lovett).

CORN FLEA BEETLE (*Chaetocnema pulicaria*) - ILLINOIS - Area> status in occasional corn fields: Mainly southern one-third of State> damaged lower leaves on high percentage of plants. No symptoms of STEWART'S WILT (*Erwinia stewartii*) noted. (K. Black).

GREENBUG (*Schizaphis graminum*) - KANSAS - Flights week ending June 1 in eastern and south-central areas gave rise to economic or near economic populations in some sorghum [seedling] fields; foliar damage not serious. District> County= counts per sorghum plant [5-8 cm] in number of fields (f) week ending June 1:

NE> Pottawatomie= 12-14 in 2f; EC> Wabaunsee= 3-55 in 2f, Lyon= 19 in 1f (K.O. Bell, Jr.), Miami= 0 to trace in 3f (S.C. White), and Coffey= 15-20 in 1f (H.L. Brooks); SW> Morton= 0 in 1f and Grant= 0 in 1f (M.L. Shuman); SC> Pratt= 30 in 2f (G.A. Salsbury); and SE> Labette= 2 in 1f, and Neosho= 35 in 1f (G.E. Lippert).

KANSAS - Winged greenbugs currently still flying to sorghum [seedling] statewide, some of heaviest flights in north-central area; recent rains very beneficial in checking populations on seedlings. District> County= averages per sorghum [host stage] plant unless stated otherwise: NC> Clay, Washington, Republic, and Jewell, and C> Lincoln= about 30 [3-10 cm tall] in 10f but ranged 25-154 in untreated fields, damage not serious yet, winged aphids and offspring seen but no second generation by June 6, some treatment (K.O. Bell, Jr.), Smith and NW> Norton= damaged volunteer sorghum in corn fields (T. Sim, IV); EC> Douglas and Wabaunsee, and NE> Leavenworth, Jefferson, Atchison, Doniphan, Brown, Pottawatomie, Marshall, Nemaha, and Jackson= 0.5-120 [3-8 cm tall] in 24f, all winged plus young, damage not serious yet (B.D. Hilbert); NE> Leavenworth= trace to 25 in several fields, no damage (L.C. Bonczkowski); EC> Anderson and Coffey, and SE> Greenwood, Montgomery, Wilson, and Labette= trace to 100 [3-13 cm tall] in 12f, some treatment (S.C. White); C> Saline= economic and Lincoln= problem with reinestation by winged aphids in treated field (R.J. Bauernfeind); Ellis= heavy flights detected by sticky traps since May 30 (T.L. Harvey); SW> Ford= 5-6 in 1f treated (J.R. VanKirk); and SC> Kiowa= 0 and 2 [3 cm tall] in 2f with recent heavy rains and 30 where no rain occurred (G.A. Salsbury).

ARKANSAS - District> County= greenbug averages per plant in grain sorghum [seedling] fields: NE> Craighead and Clay= about 3-4, treatment applied in some fields. (J. Kimbrough). ILLINOIS - Winged adults common and general on corn and milo in southern areas, indicate early nature of infestations. Situation on milo potentially serious. District> County= counts per plant on milo [10 to 25-cm]: SW> Alexander and Pulaski and SE> Massac= from 2 or 3 up to 30 on almost all plants surveyed. (K. Black).

CORN LEAF APHID (*Rhopalosiphum maidis*) - KANSAS - Area> counts on sorghum: Statewide> generally none to Tight in whorls but up to 50 per plant [13 cm tall] in EC> Anderson County. (S.C. White). ILLINOIS - First occurrence of season. District> County= status on milo [10-25 cm tall]: SW> Alexander and Pulaski and SE> Massac= this and other species 1-50+ on undetermined percentage of plants. (K. Black).

YELLOW SUGARCANE APHID (*Siphanta flava*) - KANSAS - District> County= counts on sorghum: NE> Leavenworth, Jefferson, Doniphan, Pottawatomie, and Marshall= trace. (B.D. Hilbert).

CHINCH BUG (*Blissus leucopterus leucopterus*) - KANSAS - Caused concern to growers in scattered corn [seedling] fields in eastern area, no serious damage confirmed week ending June 1. District> County= status on seedling sorghum [5-8 cm tall] in 1 field each: NE> Riley (G.E. Wilde) and Pottawatomie= stand loss up to 10% probably by this pest; overwintered adults in latter county averaged 2.5 per plant May 23, and 2.4 (ranged 0-8) per plant May 30. Infestations mainly overwintered specimens, young nymphs in some corn and sorghum fields. (K.O. Bell, Jr.).

SMALL GRAINS

DISEASES

By May 30, planting still 2 weeks behind normal in the spring wheat area of the United States. With continued favorable weather, planting will progress rapidly. Oklahoma has prospects for its best wheat crop and the prospects for Kansas are good. Nebraska suffered some damage from winter killing, particularly in the western parts. Small area near Frederick, Oklahoma, probably killed by a freeze. Narrow drought-damaged strip exists in southern Rice and Barton Counties, Kansas. Elsewhere, the winter wheat crop generally good throughout major production regions with harvest underway in south Texas and southeastern States. Majority of wheat in Kansas and Oklahoma generally 2 weeks late, from early dough in southern Oklahoma to heading in north-central Kansas. Oat seeding generally on schedule except for Minnesota, North Dakota, and Wisconsin. Moisture no problem throughout most of grain areas. (A.P. Roelfs, D.L. Long).

WHEAT LEAF RUST (Puccinia recondita f.sp. tritici) common across OKLAHOMA, KANSAS, and southern NEBRASKA. Severities of 1% at flowering will be common throughout north-central Kansas. Rains and heavy dews occurred daily throughout most of Oklahoma and Kansas week of May 23. Potential for moderate to severe leaf rust with moderate losses exists in north-central Kansas. Trace reported in NORTH CAROLINA (Newton), Rosemount and St. Paul, MINNESOTA, nurseries. (A.P. Roelfs, D.L. Long). OKLAHOMA - District> County= severity on flag leaf of late-maturing wheat varieties week ending June 1: SW> Kiowa= 40%. (K.E. Conway).

KANSAS - Wheat leaf rust widespread over northwestern area. Prevalence on wheat varied from field to field and severities light. (T. Sim, IV).

District>	County	Prevalence (%)	Severity (%)	Host stage
C>	Lincoln	trace	trace	milk
C>	Russell	50-100	trace to 10	milk
C>	Ellis	40-80	trace	post flower
NC>	Osborne	60-80	5	post flower
NC>	Smith	30-100	trace to 5	post flower
NC>	Phillips	trace	trace	post flower
NC>	Rooks	trace to 5	trace to 5	post flower
NW>	Graham	40-80	trace	post flower
NW>	Norton	trace	trace	post flower
NW>	Decatur	trace	trace	post flower
NW>	Sheridan	trace to 40	trace	post flower
NW>	Thomas	trace	trace	post flower
NW>	Rawlins	trace	trace	post flower
NW>	Cheyenne	trace	trace	post flower
NW>	Sherman	trace	trace	post flower
WC>	Wallace	trace	trace	post flower
WC>	Greeley	trace	trace	post flower
WC>	Wichita	trace	trace	post flower
WC>	Scott	trace to 40	trace	post flower
WC>	Logan	30-90	trace	post flower
WC>	Gove	80	trace	post flower
WC>	Lane	30	trace	post flower
WC>	Ness	trace to 60	trace to 5	post flower
WC>	Trego	30-40	trace	post flower

District> County	Prevalence (%)	Severity (%)	Host stage
EC> Anderson	trace to 100	trace to 40	milk
EC> Coffey	10-50	trace to 10	milk
SE> Greenwood	10	10	milk
SE> Wilson	50	6	soft dough
SE> Labette	50	10	soft dough
SC> Kiowa	10	trace	milk to soft dough
SC> Pratt	100	10	milk to soft dough
SC> Barber	100	10	milk to soft dough
SC> Harper	100	15	milk to soft dough
SC> Comanche	100	10	milk to soft dough

IOWA - District> County= wheat leaf rust prevalence/severity in wheat [flower] fields May 25 to June 8: SW> Pottawattamie, Mills, and WC> Harrison= trace to 50%/trace. (D.J. Williams). ILLINOIS - Status on wheat leaves in 1 commercial field each week of May 28 (E.G. Jordan):

District> County	Prevalence (%)	Severity (%)	Host stage
ESE> Coles	trace	trace	flowering
ESE> Jasper	trace	trace	one-fourth kernel
ESE> Cumberland	trace	trace	flowering
ESE> Richland	trace	trace	one-fourth kernel
ESE> Clay	90	2	one-half kernel
ESE> Lawrence	trace	trace	three-fourths kernel
ESE> Crawford	100	1	early milk
SE> Wayne	trace	trace	one-half kernel
SE> Jefferson	trace	trace	one-half kernel
SE> Hamilton	trace	trace	one-half kernel
SE> Franklin	100	1	full kernel
SE> Saline	50	trace	full kernel
SE> Gallatin	100	5	early milk
SE> White	100	1	full kernel
SE> Edwards	100	1	full kernel
SE> Wabash	trace	trace	full kernel
SW> Williamson	70	2	early milk
SW> Johnson	100	2	three-fourths kernel

WISCONSIN - First trace of wheat leaf rust on winter wheat. District> County= status on winter wheat: SC> Dane= trace by June 5, no infection yet in most fields. (O.L. Lovett).

RYE LEAF RUST (*Puccinia recondita* f.sp. *secalis*) - IOWA - District> County= prevalence/severity in rye [flower] fields May 25 to June 8: SW> Taylor= 100%/5-25%. (D.J. Williams).

No OAT CROWN RUST (*Puccinia coronata* var. *avenae*) in OKLAHOMA and KANSAS - week of April 23. Aelial development of CROWN RUST (*Puccinia coronata*) on buckthorn heads light at St. Paul, MINNESOTA, May 17-30. Free moisture present for basidiospore production but nights too cool for good basidiospore germination. (A.P. Roelfs, D.L. Long). OKLAHOMA - District> County= severity on oats week ending June 1: SW> Kiowa= trace to 5%. (K.E. Conway). KANSAS - First of season. District> County= prevalence on oats: SC> Kiowa= trace in 1 field. (T. Sim, IV). WISCONSIN - District> County= status on small grains: SC> Dane and Rock= began appearing in fields near buckthorn June 4. (O.L. Lovett).

Trace WHEAT STRIPE RUST (Puccinia striiformis) observed in Pacific Northwest. (Line). Infections will not be severe this year in Pacific Northwest. Infection found in CALIFORNIA nurseries but none in commercial fields. (A.P. Roelfs, D.L. Long).

For STEM RUSTS (Puccinia graminis) see page 389.

SPECKLED LEAF BLOTH (Septoria tritici) - KANSAS - Common in most wheat fields in northwestern area. (T. Sim, IV).

<u>District> County</u>	<u>Prevalence (%)</u>	<u>Severity</u>
C> Lincoln	100	moderate
C> Russell	100	moderate
C> Russell	30	light
C> Ellis	5	light
NC> Osborne	30-80	moderate
NC> Smith	10-100	light
NC> Phillips	100	moderate
NC> Rooks	100	light
NW> Graham	90-100	light to moderate
NW> Norton	30	light
NW> Decatur	none seen	
NW> Sheridan	trace to 80	light
NW> Thomas	10-80	light
NW> Rawlins	10-80	light
NW> Cheyenne	none seen	
NW> Sherman	none seen	
WC> Wallace	20	light
WC> Greeley	10	light
WC> Wichita	none seen	
WC> Scott	none seen	
WC> Logan	90	light
WC> Gove	10	light
WC> Lane	100	moderate
WC> Ness	100	moderate
WC> Trego	60	moderate
NE> Leavenworth	100	moderate
EC> Anderson	100	moderate
EC> Coffey	10	light
SE> Greenwood	100	moderate
SE> Wilson	100	light
SE> Neosho	100	moderate
SC> Kiowa	trace	-
SC> Pratt	none seen	
SC> Barber	none seen	
SC> Harper	none seen	
SC> Comanche	none seen	

IOWA - District> County= speckled leaf blotch prevalence/severity on wheat [boot to flower] week ending June 1: WC> Monona, Harrison, and SC> Ringgold= 60%/trace to 5%; and SW> Pottawattamie and Mills= 90%/trace to 10%. (D.J. Williams). ILLINOIS - District> County= status on wheat leaves in 1 commercial field week of May 28 (E.G. Jordan):

District> County	Prevalence (%)	Severity (%)	Host stage
ESE> Coles	100	2	flowering
ESE> Cumberland	100	3	flowering
ESE> Jasper	100	5	one-fourth kernel
ESE> Richland	100	3	one-fourth kernel
ESE> Clay	100	5	one-half kernel
ESE> Lawrence	100	10	three-fourths kernel
ESE> Crawford	100	12	early milk
SE> Wayne	100	8	one-half kernel
SE> Jefferson	100	20	one-half kernel
SE> Hamilton	100	18	one-half kernel
SE> Gallatin	100	18	early milk
SE> White	100	22	full kernel
SE> Edwards	100	12	full kernel
SE> Wabash	100	15	full kernel
SE> Franklin	100	25	full kernel
SE> Saline	100	12	full kernel
SW> Williamson	100	15	early milk
SW> Johnson	100	10	three-fourths kernel

SPECKLED BLOTH (Leptosphaeria (*Septoria*) *avenaria*) - IOWA - District> County= prevalence/severity of imperfect stage on oats [Joint] week ending June 1: WC> Monona= 80%/trace to 5%. (D.J. Williams).

WHEAT POWDERY MILDEW (*Erysiphe graminis* f.sp. *tritici*) - ILLINOIS - District> County= status on wheat in 1 commercial field each week of May 28 (E.G. Jordan):

District> County	Prevalence (%)	Severity (%)	Host stage
ESE> Lawrence	100	3	three-fourths kernel
ESE> Crawford	100	5	early milk
SE> Gallatin	100	15	early milk
SE> White	100	3	full kernel
SE> Edwards	100	2	full kernel
SE> Wabash	100	5	full kernel
SE> Hamilton	100	2	one-half kernel
SW> Johnson	100	6	three-fourths kernel

OKLAHOMA - District> County= wheat powdery mildew prevalence on 'TAM 101' wheat week ending June 1: NE> Wagoner= 5-7%. (K.E. Conway). KANSAS - Heavy on wheat in some eastern counties. District> County= status on wheat: EC> Anderson= on heads in some areas and destroying plants; and NE> Leavenworth= prevalence 85% in 1 field. (T. Sim, IV). IOWA - District> County= prevalence/severity on wheat [boot to flower] week ending June 1: SW> Pottawattamie, Mills, and WC> Harrison= 10-50%/trace to 10%; Woodbury and Monona= 70-95%/trace to 20%; SW> Taylor and Page= 25%/trace to 5%. (D.J. Williams).

CEPHALOSPORIUM STRIPE (Cephalosporium gramineum) - ILLINOIS - District> County= prevalence on wheat [host stage] in 1 commercial field each week of May 28: ESE> Coles, Cumberland, Jasper, Richland, Clay, Lawrence, and Crawford= trace to 5% [flowering to early milk]; SE> Wayne, Jefferson, Hamilton, Gallatin, White, Edwards, Wabash, Franklin, and Saline= trace to 10% [one-half kernel to early milk]; SW> Williamson= trace [early milk] and Johnson= trace [three-fourths kernel]. (E.G. Jordan).

TAN SPOT (Pyrenophaora trichostoma) - KANSAS - Common in most wheat fields in northwestern area. (T. Sim, IV).

<u>District> County</u>	<u>Prevalence (%)</u>	<u>Severity</u>
C> Lincoln	10	moderate
C> Russell	100	moderate
C> Russell	15	light
C> Ellis	20	light
NC> Osborne	80-100	moderate
NC> Smith	30	light
NC> Phillips	100	light
NC> Rooks	none seen	
NW> Graham	trace to 30	moderate
NW> Norton	none seen	
NW> Decatur	trace	-
NW> Sheridan	trace to 30	-
NW> Thomas	5-60	light
NW> Rawlins	trace to 5	light
NW> Cheyenne	trace	-
NW> Sherman	trace	-
WC> Wallace	trace	-
WC> Greeley	none seen	
WC> Wichita	none seen	
WC> Scott	none seen	
WC> Logan	10-30	light
WC> Gove	70	light
WC> Lane	100	moderate
WC> Ness	none seen	
WC> Trego	none seen	
NE> Leavenworth	none seen	
EC> Anderson	100	heavy
EC> Coffey	100	light
SE> Greenwood	none seen	
SE> Wilson	100	light
SE> Neosho	100	moderate
SC> Kiowa	100	heavy
SC> Pratt	100	heavy
SC> Barber	100	heavy
SC> Harper	100	heavy
SC> Comanche	100	heavy

TAKE-ALL (Gaeumannomyces graminis var. tritici) - KANSAS - District> County= status: EC> Wabaunsee= prevalence of this disease and DRYLAND ROOT AND FOOT ROT (Helminthosporium sp. and Fusarium sp.) 40% in 1 wheat field; NC and NW> every county= dryland root and foot rot evident in fields. (T. Sim, IV).

LOOSE SMUT (*Ustilago nuda*) - KANSAS - District> County= prevalence on wheat: NW> Decatur= trace in 2 fields and Rawlins= trace in 1 field. (T. Sim, IV). ILLINOIS - Prevalence on wheat [host stage] in 1 commercial field each week of May 28: SE> Hamilton= trace [one-half kernel] and ESE> Jasper= trace [one-fourth kernel]. (E.G. Jordan).

OAT LOOSE SMUT (*Ustilago avenae*) - KANSAS - District> County= prevalence on oats: SE> Montgomery= trace in 1 field. (T. Sim, IV).

SCAB (*Fusarium spp.*) - ILLINOIS - District> County= prevalence on wheat [host stage] in 1 commercial field each week of May 28: ESE> Cumberland, Richland, Clay, Lawrence, and Crawford= on few scattered plants [flowering to early milk]; SE> Wayne, White, Gallatin, Edwards, Wabash, Franklin, and Saline= on few scattered plants to 2% [one-half kernel to early milk]; SW> Johnson= on few scattered plants [three-fourths kernel], and Williamson= 1% [early milk]. (E.G. Jordan).

CRAZY TOP DOWNY MILDEW (*Sclerophthora macrospora*) - KANSAS - District> County= prevalence on wheat: C> Saline= trace in 1 field. (T. Sim, IV).

SPOT BLOTCH (*Helminthosporium sativum*) - IOWA - District> County= prevalence/severity on wheat [boot to flower] week ending June 1: SW> Pottawattamie and Mills and WC> Harrison= 20-30%/trace to 5%. (D.J. Williams).

A LEAF BLOTCH (*Helminthosporium sp.*) - KANSAS - District> County= prevalence on oats: SC> Barber= 100% in 1 field. (T. Sim, IV).

XANTHOMONAS BACTERIAL STRIPE (*Xanthomonas translucens*) - IOWA - District> County= prevalence/severity on small grains [host stage] May 25 to June 8: SW> Fremont= 5-10%/trace to 10% in barley [boot] fields, and Taylor and Fremont= 5-10%/trace to 10% in rye [flower] fields. (D.J. Williams).

BLACK CHAFF (*Xanthomonas translucens* f.sp. *undulosa*) - KANSAS - District> County= prevalence on wheat: C> Lincoln= 2% in 1 field. (T. Sim, IV).

HALO BLIGHT (*Pseudomonas coronafaciens*) - IDAHO - District> County= prevalence/severity on oats [joint to boot] May 25 to June 8: E> Fremont= 20%/trace. (D.J. Williams).

BARLEY YELLOW DWARF VIRUS - ILLINOIS - District> County= prevalence on wheat [host stage] in 1 commercial field each week of May 28: ESE> Coles, Cumberland, Jasper, Richland, Clay, Lawrence, and Crawford= trace [flowering to early milk]; SE> Wayne, Jefferson, Hamilton, Gallatin, White, Edwards, Wabash, Franklin, and Saline= trace [one-half kernel to early milk]; and SW> Williamson= trace [early milk] and Johnson= trace [three-fourths kernel]. (E.G. Jordan).

WHEAT STREAK MOSAIC VIRUS - KANSAS - Especially light in northwestern area. District> County= prevalence in 1 wheat field each: NC> Phillips= 15%, NW> Graham= trace, and WC> Ness= trace. (T. Sim, IV).

INSECTS

ARMYWORM (*Pseudaletia unipuncta*) - KANSAS - Light to very heavy on wheat, fescue, and brome in limited surveys at some sites in eastern area; heavier in denser and taller fields, meadows or pastures week ending June 1. District> County= averages per 0.3 row m of wheat [head to post bloom] in number of fields (f): C> Dickinson= 0.2-4.1 in 3f; EC> Wabaunsee= 0.3 in 1f, Lyon=

5-20 in 2f, up to 80% defoliation and no head damage (K.O. Bell, Jr.), Miami= 0-0.5 in 3f, and Linn= 0-0.5 in 3f (S.C. White). Armyworm on wheat: SC> Kiowa= unusual report of larvae (1.9-3 cm long) clipping some heads in 1 field where all leaves killed by unknown disease (G.A. Salsbury); SW> Clark, Meade, Finney, and Kearny= none found (D.E. Mock); SE> Cowley= treatment continued in small grains and possibly in some surrounding counties (K.O. Bell, Jr.); EC> Lyon, SE> Cowley, and SC> Sumner= small grains treated (H.L. Brooks, K.O. Bell, Jr.).

Kansas - District> County= current armyworm larval status per 0.3 m unless stated otherwise on wheat [host stage] in number of fields (f): SE> Cherokee, Neosho, and Montgomery= treatment of infested plants common in southeastern area, some fields defoliated with beard clipping but no head clipping; EC> Chase and SE> Chautauqua= scarce (G.E. Lippert); Greenwood, Montgomery, Wilson, and Labette= averaged 0-5 [milk to dough] in 8f, some pupation probably underway, about 2 of 5 larvae per 0.3 row m killed by Apanteles militaris (a braconid wasp) in defoliated field; EC> Anderson and Coffey= averaged 0-30 [milk to dough] in 7f with leaves and beards eaten in field with larvae 30 per 0.3 m (head clipping trace) and 3 larvae per 0.3 m killed by a braconid wasp (S.C. White); Shawnee and Wabaunsee, and NE> Leavenworth, Jefferson, Atchison, Doniphan, Brown, Pottawatomie, Marshall, and Nemaha= averaged 0-1 with up to 4 per 0.3 m in Shawnee County and 5-8 per 0.09 sq m in spots of lodged wheat in Doniphan and Leavenworth Counties (B.D. Hilbert); Riley= trace (L.C. Bonciskowski); C> Lincoln, Saline and McPherson, and SC> Harvey= less than 1 per 0.3 row m in several fields; SE> Cowley and SC> Sumner= much wheat treated (R.J. Bauernfeind) and Barber= reports of treating (H.L. Brooks); SW> Clark= treating as far west as this county (D.E. Mock); SE> Cowley= defoliated many fields and some with all beards clipped but no heads clipped near Geuda Springs with many larvae fully grown (R.J. Bauernfeind); SW> Clark= averaged up to 6-24 in southern area with some heavy defoliation; Ford, Grant, or Stanton= no larvae on wheat checked (D.E. Mock); SC> Comanche= larvae, 0.64-3.8 cm long, averaged 7 and 15 [milk to dough] in 2f, Kiowa= 0 in 1f and Barber= 1 in 1f (G.A. Salsbury); NE> Riley, NC> Clay, Washington, Republic, Jewell and Mitchell and C> Lincoln= larvae usually light, 0-0.5, in 17f with average of 6 in 1f in Washington County and 3 in 1f in Riley County (K.O. Bell, Jr.); SE> Cowley= larvae migrated from wheat at 1 site into fescue lawn and some had not yet reached corn few hundred meters away (R.J. Bauernfeind); EC> Douglas and NE> Brown and Jefferson= averaged 0-3.5 in brome at 4 sites (B.D. Hilbert).

KENTUCKY - Area> armyworm status: Southern> problems seemed to decline as barley harvested, wheat harvest 2 weeks away. Many larvae nearly full grown; Northern> still no problems. (P.E. Sloderbeck). OHIO - District> County= larvae on wheat: SC> Brown= 0.05 per sweep. (G.P. Walker). MARYLAND - District> County= status on barley: Eastern Shore> Worcester, Wicomico, and Caroline and NC> Queen Anne and Kent= infestations well above normal. About 70% of acreage treated to date; remaining areas of State lightly infested. Some head clipping, most treated before damage occurred. (J.L. Hellman).

PALE WESTERN CUTWORM (*Agrotis orthogonia*) - MONTANA - First of season. District> County= larval status on winter wheat week ending June 1: NC> Pondera= estimated damage by larvae, 2.22-3.18 cm long, less than 1% at Brady. (J. Barringer, G. Jensen).

HESSIAN FLY (*Mayetiola destructor*) - SOUTH DAKOTA - Potential for damage heavy compared to 1978. District> County= status on wheat week ending June 1: NC> Brown= adults began emerging May 22, heavy emergence north of Groton and near Aberdeen, and Potter= adults began emerging May 22, lighter but substantial emergence in Gettysburg area. Egg laying occurred. (B.H. Kantack et al.).

GREENBUG (*Schizaphis graminum*) - KANSAS - Area> status on wheat week ending June 1: E> usually tight populations increased, winged adults apparently flying into fields; SW> none found. District> County= counts in 1 wheat field: EC> Linn= usually averaged trace to 10 per 0.3 row m, up to 25 (S.C. White) and Wabaunsee= 15 per 0.3 m. (K.O. Bell, Jr.). Area> current status on wheat: E> generally increased and NE and NC> lady beetle larvae heavy in infested wheat in some counties. (K.O. Bell, Jr.).

AN APHID (*Rhopalosiphum padi*) - KANSAS - District> County= counts per 0.3 row m: SC> Kiowa= averaged 200 on oats (G.A. Salsbury); SE> Greenwood= averaged up to 50 on wheat [milk] (S.C. White); and NC> Clay= infested 2-5% of heads of wheat in 2 fields (K.O. Bell, Jr.).

ENGLISH GRAIN APHID (*Macrosiphum avenae*) - OHIO - District> County= status on wheat: SW> Warren= mostly this species infested 10% of plants, and Clermont= infested 3% and 6%; and SC> Brown= 0.67 per sweep and Scioto= 2 per sweep. (G.P. Walker).

ASTER LEAFHOPPER (*Macrosteles fascifrons*) - NORTH DAKOTA - District> County= adults per 100 sweeps of barley [tillerling]: SE> Richland= 33. (C.G. Scholl).

CHINCH BUG (*Blissus leucopterus leucopterus*) - KANSAS - Nymphs common in many wheat fields in eastern area week ending June 1; overwintered adults apparently continued egg laying. District> County= status on wheat week ending June 1: C> Dickinson= dead adults common in spots in 3 fields, some apparently due to a fungus but most unknown; populations not greatly affected. (K.O. Bell, Jr.). District> County= current counts on wheat: EC> Anderson and Coffey near Colony and Le Roy (S.C. White) and NC> Washington near Lynn (K.O. Bell, Jr.)= some heavy infestations of nymphs and adults.

BARLEY THRIIPS (*Limothrips denticornis*) - NORTH DAKOTA - District> County= counts (average) per 100 sweeps of rye: SE> Dickey and Ransom= up to 26 (19). (C.G. Scholl)..

TURF, PASTURES, RANGELAND

DISEASES

A SHEATH NEMATODE (*Hemicyclophora* sp.) - OKLAHOMA - District> County= counts of this species, a STUBBY-ROOT NEMATODE (*Trichodorus* sp.), a STUNT NEMATODE (*Tylenchorhynchus* sp.), and LEPTONCHID NEMATODES (*Leptonchus* sp. and *Tylencholaimellus* sp.) per 100 ml of soil of Kentucky fescue April 24 to May 25: SC> Atoka= 31, 4, 4, 180, and 16, respectively. (K.E. Conway).

INSECTS

ARMYWORM (*Pseudaletia unipuncta*) - KANSAS - District> County= larval averages per 0.09 sq m of fescue pastures or hay meadows in number of sites (s) week ending June 1: C> Dickinson= 0.5 in 1s; EC> Wabaunsee= 12-23 in 2s and Lyon= 40 in 1s, larvae 0.64-3.18 cm long, fed on about 50% of foliage in hay meadow and some migrated into and damaged corn foliage [seedling, 15 cm tall] in adjacent field (K.O. Bell, Jr.); SE> Neosho= migrated from fescue into sorghum, caused some serious plant damage (G.E. Lippert); and EC> Lyon= migrated in large numbers from fescue in schoolyard at Emporia into adjacent lawns in nearby 3 to 4-block area, concern to homeowners; some treatment (K.O. Bell, Jr., A.E. Maley).

GREENBUG (Schizaphis graminum) - OHIO - District> County= status on home lawns: C> Franklin= wingless aphids appeared. (H.D. Niemczyk).

CHINCH BUG (Blissus leucopterus leucopterus) - OHIO - First nymphs of season. District> County= status: NE> Wayne and C> Franklin= 1st instars on turf grass. (H.D. Niemczyk).

GRASSHOPPERS - ARKANSAS - District> County= mostly 2nd instar nymphs per 0.09 sq m of fescue, orchardgrass, and ryegrass pastures: NE> Independence= probably Melanoplus spp. up to 20-30 on 6,070.3-8,093.7 ha. About 3 times greater than treatment level. (L. Sandage). ILLINOIS - Nymphs heavy in grassy areas and forage crops in most areas. Accurate population estimates difficult due to size of nymphs. District> County= estimated counts per 0.09 sq m in grassy area: WSW> Sangamon= 100+, some treatments applied. (K. Black).

FORAGE LEGUMES

DISEASES

SPRING BLACK STEM (Phoma medicaginis) - KANSAS - Still on rest of first alfalfa growth in northwestern area; defoliation indicated by asterisks (T. Sim, IV):

District> County	Prevalence (%)	Severity	Host height (cm)
C> Lincoln	10	light	8
NC> Phillips*	100	moderate	71
NW> Sheridan*	100	moderate	66
NW> Rawlins	90	moderate	38
WC> Wallace	10	light	38
WC> Greeley	100	light	61
WC> Wichita	30	light	30

ALFALFA DOWNY MILDEW (Peronospora trifoliorum) - KANSAS - Common in remainder of first alfalfa growth in northwestern area, affected second growth in 1 Barber County field. (T. Sim, IV).

District> County	Prevalence (%)	Severity	Host height (cm)
NC> Rooks	80	moderate	30
NW> Sheridan	2-5	light	66
NW> Rawlins	5	moderate	38
WC> Greeley	trace	-	61
SC> Barber	30	moderate	46

WISCONSIN - Light green patches due to alfalfa downy mildew common on alfalfa leaves in southern area. District> County= prevalence/severity on newly planted alfalfa with oat cover crop: SC> Dane= 80%/about 10%, very heavy. (O.L. Lovett)

YELLOW LEAF BLOTCH (Pseudopeziza jonesii) - KANSAS - Evident on first alfalfa growth in few fields in northwestern area. District> County= prevalence/severity on alfalfa [host height]: NC> Phillips= 70%/moderate [71 cm] and NW> Sheridan= trace/- [66 cm]. (T. Sim, IV).

COMMON LEAF SPOT (Pseudopeziza medicaginis) - WISCONSIN - District> County= status of symptoms on alfalfa: SW> Grants small, black, pepper-like spots heavy in some fields, leaflets infected two-thirds of way up stem, leaves yellowed and leaf drop heavy. (O.L. Lovett).

CLOVER SCLEROTINIA WILT (*Sclerotinia trifoliorum*) - MARYLAND - Heaviest incidence in 16 years. Area> status on alfalfa: C> infestation light to moderate on 5-10%, spotty when heavy. (J.L. Hellman).

INSECTS

ALFALFA WEEVIL (*Hypera postica*) - MONTANA - District> County= egg status on forage legumes: SW> Gallatin= hatched. (G.L. Jensen). NORTH DAKOTA - District> County= adults (average) per 100 sweeps of irrigated alfalfa [20-36 cm tall]: WC> McKenzie= 14-60 (35), no larvae noted. (W.J. Brandvik).

MINNESOTA - Alfalfa weevil development on schedule in southern districts. First alfalfa growth in some southern counties will escape damage. District> County= larval average per 100 sweeps of alfalfa in number of fields (f): SC> Freeborn, Le Sueur, and Waseca= 70 in 15f and SE> Dakota, Dodge, Goodhue, and Mower= 90 in 20f. Degree-day accumulation (base 8.9°C) May 7 to June 3 (D. Sreenivasam):

District>	Degree-days	District>	Degree-days
SW>	173	WC>	123
SC>	174	C>	109
SE>	169	EC>	118

ARKANSAS - District> County= alfalfa weevil larvae and adults per 25 sweeps of alfalfa: NW> Benton= up to 30 and up to 5 (M.A. Mayse). IOWA - Area> status on alfalfa: E and NE> larvae heavy; EC District> Jackson County= economic damage reported; S> timely cutting will eliminate need for treatment in many instances; E> potential for damage to regrowth exists. (J.R. DeWitt).

WISCONSIN - Alfalfa harvest well underway and used to control majority of infestation in southern one-half area; frosting began to show up. District> County= status on alfalfa: C> Marquette and Waushara, SC> Columbia and Dane, and SW> Sauk= defoliation severe and tip damage 100%; EC> Calumet and Manitowoc= mostly 2nd instar larvae, tip damage 40% in many fields with a few up to 100%; WC> La Crosse, Trempealeau, Buffalo, Pepin, Pierce, St. Croix, Dunn, Eau Claire, and Monroe= tip damage 5-7%, harvest started and should control most infestations, few unhatched egg clusters in alfalfa stems; NC> Marathon= tip damage less than 10%; SC> Dane and SW> Sauk= damaged up to 70% of new shoots; and WC> La Crosse= damage somewhat lighter. District> County= degree-day accumulation (8.9°C) March 1 to June 6: SC> Dane= 302 at Madison; SE> Washington= 262 at Hartford; EC> Outagamie= 226 at Appleton; WC> Dunn= 257 at Menomonie; and C> Waushara= 281 at Hancock. Warm, dry weather suitable for much alfalfa harvesting in southern one-half area, but inadequate for regrowth. (O.L. Lovett).

ILLINOIS - Area> alfalfa weevil status: C> damage sustained in occasional late-harvested alfalfa fields; populations, for most part, decreased. Most fields harvested and no further damage by larvae expected. Some damage may continue, particularly on early regrowth, from adult feeding. Heat unit accumulation (base 48°F) as of June 6 follows. (K. Black).

District> County	Station	Heat Unit
NW> Winnebago	Rockford	616
NW> Rock Island	Moline	784
NE> Will	Elwood	682
C> Mason	Kilbourne	781

District> County	Station	Heat Unit
W> Adams	Quincy	907
E> Champaign	Urbana	771
ESE> Fayette	Brownstown	853

INDIANA - District> County= alfalfa weevil status on alfalfa: C> Marion= most alfalfa near harvest north of Indianapolis and cutting noted as far north as Michigan border; where damage not severe, larvae heavy and may prevent or severely inhibit regrowth since alfalfa fields very dry, north of Indianapolis. District> County= heat unit accumulation (base 48°F) January 1 to June 7: NW> La Porte= 790 at Wanatah; WC> Tippecanoe= 807 at West Lafayette; NC> St. Joseph= 732 at South Bend; NE> Allen= 790 at Fort Wayne; C> Marion= 894 at Indianapolis; and SW> Vanderburgh= 1,072 at Evansville. (R.W. Meyer).

KENTUCKY - Season over throughout most of State. District> County= alfalfa weevil larval status in alfalfa: C> Hardin= damage heavy, averaged 90 per 30 stems, in 2 fields early last week. Fields treated very early and harvest delayed due to other field work and weather conditions. (P.E. Sloderbeck et al.). OHIO - District> County= status on alfalfa [25 cm tall]: SC> Pike= larvae 1 per sweep and several second generation adults in 1 field. (G.P. Walker). NEW YORK - Larvae in 4th instar throughout central region. Pupation to begin week ending June 15. (Helgesen).

VARIEGATED CUTWORM (Peridroma saucia) - KANSAS - District> County= status on alfalfa: SE area> activity decreased as larvae pupated (G.E. Lippert); northern one-half of E area> still damaging regrowth in scattered fields in some areas; NC> Clay and Ottawa, NE> Pottawatomie, EC> Wabaunsee, and NE> Leavenworth= some serious damage (B.D. Hilbert et al.), Pottawatomie= larvae 5-6 per 0.09 sq m held regrowth back in 12-ha field cut last week of May, few halfgrown larvae still present (H.L. Brooks). ARKANSAS - District> County= status on alfalfa: NW> Benton= large larvae light; viral and bacterial diseases very heavy. (M.A. Mayse).

ALFALFA LOOPER (Autographa californica) - WASHINGTON - Total of 2,234 adults averaged 186 per trap in northwestern area May 28. District> County= adults per trap: W> Snohomish= averaged 76, Skagit= 304, and Whatcom= 96; and SE> Whitman= 10-200 per night, heavy along eastern border near Pullman, and Walla Walla= 100 per night in Walla Walla and Milton and Freewater areas. Heavy populations predicted for 1979. (P. Eide, E. Halfhill).

GREEN CLOVERWORM (Plathypena scabra) - WISCONSIN - District> County= status on alfalfa: EC> Manitowoc and Calumet= 2nd and 3rd instar larvae light, 1 per 10 sweeps, and SC> Dane= first adult of season in pheromone trap June 1. (O.L. Lovett).

ALFALFA BLOTCH LEAFMINER (Agromyza frontella) - NEW YORK - Most larvae completed development and about to pupate, adult emergence expected in about 3 weeks. (Helgesen). MAINE - County= status on leaves of alfalfa: Penobscot= pinholed 50% at Orono, no mining noted. (A. Gall).

POTATO LEAFHOPPER (Empoasca fabae) - ILLINOIS - Area> counts per 100 sweeps of alfalfa: Southern one-third> up to 40, some nymphs. (K. Black). KENTUCKY - Populations increased rapidly. District> County= status: Midwestern> Simpson= populations nearly doubled from previous week, still below economic levels, averaged nearly 0.4 per sweep in 23 alfalfa [about 38 cm tall] fields (191 ha) surveyed. (P.E. Sloderbeck et al.).

OHIO - District> County= potato leafhopper status on alfalfa: SC> Pike= adults 0.16 per sweep. (G.P. Walker). NEW YORK - First migrants of season. On alfalfa in central region, about 1 week early. (Helgesen). MARYLAND - First infestation of season. District> County= counts per sweep of alfalfa: NC> Kent= 1-6 in 32 ha. General infestations and yellowing damage not expected for 2-3 weeks. (J.L. Hellman).

PEA APHID (*Acyrthosiphon pisum*) - NORTH DAKOTA - District> County= nymphs and adults (average) per 100 sweeps of dryland alfalfa [23-36 cm tall]: SE> Dickey, LaMoure, and Richland= 0.5-42 (13.6). (C.G. Scholl). WISCONSIN - District> County= counts on alfalfa: EC> Manitowoc= 30 per sweep where many were winged, counts in other parts lighter. (O.L. Lovett). ARKANSAS - District> County= status on alfalfa fields: NW> Benton= relatively light to very heavy. Parasitism seemed heavy. (M.A. Mayse).

MEADOW SPITTLEBUG (*Philaenus spumarius*) - ILLINOIS - Area> status on alfalfa: Southern one-half> nymphal feeding decreased, adults common. (K. Black).

TARNISHED PLANT BUG (*Lygus lineolaris*) - ARKANSAS - District> County= adults per 25 sweeps of alfalfa: NW> Benton= up to 25. (M.A. Mayse).

SOYBEANS

INSECTS

BEAN LEAF BEETLE (*Cerotoma trifurcata*) - IOWA - District> County= status on soybeans: C> Story and Webster= light feeding in isolated fields. No treatments necessary. (L.H. Townsend). ILLINOIS - Area> status: Statewide> damaged soybeans, few treatments applied, actual need questionable. (K. Black). NORTH CAROLINA - Area> status: Coastal Plain> adults defoliated soybeans; damage seemed heaviest in southern and Tidewater counties. Damage not economic. (T. Hunt).

DINGY CUTWORM (*Feltia ducens*) - IOWA - District> County= status on soybeans: C> Webster and NC> Kossuth= damaged. (J.R. DeWitt).

COTTON

INSECTS

BOLL WEEVIL (*Anthonomus grandis grandis*) - MISSISSIPPI - Pheromone traps monitored May 24-30 (R. Anderson):

<u>District> County</u>	<u>Number of traps</u>	<u>Adults captured</u>
SW> Franklin	2	2
SW> Adams	6	2
SW> Copiah	33	7
SW> Hinds	4	3
SW> Lincoln	2	12
SC> Covington	8	20
EC> Monroe	13	3
C> Madison	10	6
C> Rankin	28	10
C> Scott	2	4
NC> Yalobusha	20	22

SOUTH CAROLINA - District> County= boll weevil status on cotton: S> Allendale, Bamberg, and Barnwell= adults light to moderate. (J.T. Walker, J.W. Chapin).

BOLLWORMS (*Heliothis* spp.) - MISSISSIPPI - Larvae light on cotton in many areas. Feeding confined to terminal of plant, damage light. (R. Anderson).

THIRIPS (*Frankliniella* spp.) - MISSISSIPPI - Continued to damage cotton [seedling] in many areas. Controls successful. (R. Anderson).

TOBACCO

INSECTS

TOBACCO BUDWORM (*Heliothis virescens*) - NORTH CAROLINA - District> County= status on tobacco (T.N. Hunt):

District> County	Fields sampled (acreage)	Fields above threshold level (10% infestation)	Heaviest in- festation (%)	Average field infes- tation (%)
Southern Coastal> Bladen	253 (about 400 ha)	60	17	4.9
Central Coastal> Lenoir	150	68	25	8
Northern Coastal> Martin	57 (117 ha)	15	22	7
Northern Pied- mont> Granville	25 (263 ha)	11	30	3

TOBACCO FLEA BEETLE (*Epitrix hirtipennis*) - NORTH CAROLINA - District> County= status on tobacco: Central Coastal> Lenoir= 137 of 377 fields at threshold, average infestation level 5 per plant. Controls applied. (A. Harper).

GREEN PEACH APHID (*Myzus persicae*) - NORTH CAROLINA - Infestations light but colonies increased. District> County= status: Central Coastal> Lenoir= 1 of 377 tobacco fields needed treatment. (T.N. Hunt).

SUGAR BEETS

INSECTS

ARMY CUTWORM (*Euxoa auxiliaris*) - COLORADO - District> County= status on sugar beets: N> Logan= damaging populations in several fields. Controls applied. (J.N. Read).

SPINACH LEAFMINER (*Pegomya hyoscyami*) - COLORADO - District> County= status on sugar beets: EC> Yuma= egg masses 2-3 per plant. (S.L. Pilcher).

MISCELLANEOUS FIELD CROPS

INSECTS

DINGY CUTWORM (*Feltia ducens*) - MINNESOTA - First cutworm damage on sunflowers. District> County= status on sunflowers: WC> Grant= larvae, 1.2-1.9 cm long, averaged less than 1 per 0.09 sq m on sunflowers [averaged 5 cm tall] in 1 field, estimated damage about 1%. (D. Sreenivasam). INDIANA - District> status on sunflowers: NW> larvae infested sunflowers [just emerging] in 1 field, treatment necessary. (C.R. Edwards).

POTATOES, TOMATOES, PEPPERS

INSECTS

COLORADO POTATO BEETLE (*Leptinotarsa decemlineata*) - TENNESSEE - District> County= status on potatoes: West Tennessee> McNairy and Hardeman= continued to cause problems, at treatable levels in many areas. (J. Locke). OHIO - District> County= adults on potatoes: NC> Huron= 2-3 per plant in some areas and SC> Brown and Pike= 2 per 3.0 row m. (D.E. Simonet, G.P. Walker). NEW YORK - First adult activity of season. District> County= adults: W> Monroe= observed May 23 (Miller) and in Capital region May 21-27 (Cuniglio).

POTATO FLEA BEETLE (*Epitrix cucumeris*) - OHIO - District> County= adult status on potatoes: SC> Brown and Pike= all leaves showed some damage. Adults 2.5 per leaf and 1.1 per leaf, respectively, in 2 fields. NE> Wayne= active. (G.P. Walker, D.E. Simonet).

EUROPEAN CORN BORER (*Ostrinia nubilalis*) - WISCONSIN - District> County= status: NE> as far north as Oconto and NC> Marathon= adults trapped and SW> Sauk= many females with eggs swept from potatoes in Spring Green area, potatoes appeared to be preferred host. (O.L. Lovett).

POTATO LEAFHOPPER (*Empoasca fabae*) - WISCONSIN - District> County= adults per 25 sweeps of potatoes and snap beans: SW> Sauk= 3-4 in Spring Green area. (O.L. Lovett).

BEANS AND PEAS

INSECTS

PEA APHID (*Acyrthosiphon pisum*) - WISCONSIN - District> County= status on peas: WC> La Crosse and Trempealeau, SW> Sauk and Iowa, and C> Waushara= nymphs 0.25-4 per 25 sweeps, many close to maturity. (O.L. Lovett).

COLE CROPS

INSECTS

IMPORTED CABBAGEWORM (*Pieris rapae*) - NEW YORK - First eggs and larvae of season. District> County= status: W> Ontario= eggs and larvae on commercial cabbage. (Pedersen).

DIAMONDBACK MOTH (*Plutella xylostella*) - NEW YORK - First larvae of season. District> County= status: W> Ontario and Orleans= larvae on cabbage. (Pedersen).

GREEN PEACH APHID (*Myzus persicae*) - NEW YORK - First activity of season. District> County= status: W> Ontario and Yates= observed on cabbage. (Pedersen).

GENERAL VEGETABLES

INSECTS

BLACK CUTWORM (*Agrotis ipsilon*) - NEW YORK - Larvae, mostly 2nd and 3rd instar. District> County= status on muck grown onions: C> Oswego= damage heavy (Young) and W> Orleans= damage heavy (Grad). Damaged 20-100% of five 0.4-ha strips of onion plantings. Replanting to alternative crops required in some areas. (H.R. Wilson).

CORN EARWORM (*Heliothis zea*) - NEW YORK - First of season. Activity earlier than normal. District> County= adults in blacklight trap: Long Island> Suffolk= taken. (Semel).

FALL ARMYWORM (*Spodoptera frugiperda*) - NEW YORK - First of season. Activity earlier than normal. District> County= status: Long Island> Suffolk= adults in blacklight and pheromone traps. (Semel).

ASTER LEAFHOPPER (*Macrosteles fascifrons*) - WISCONSIN - District> County= counts per 100 sweeps: WC> Monroe, La Crosse, Trempealeau, and Buffalo= 16-28 on oats, much heavier than month ago on winter grains; SC> Dane and SW> Sauk= almost 5, unchanged. (O.L. Lovett).

GREEN PEACH APHID (*Myzus persicae*) - OHIO - District> County= average per leaf lettuce plant: NC> Huron= 15-20 in 1 field. (D.E. Simonet).

DECIDUOUS FRUITS AND NUTS

DISEASES

APPLE SCAB (*Venturia inaequalis*) - VERMONT - County= percent unformed spores, percent spore immaturity, percent spore maturity, and percent discharged on fruit trees May 24-31: Windham at Putney= 19%, 50%, 8%, and 23%; Addison at Shoreham= 19%, 6%, 26%, and 49%; Grand Isle at South Hero= 19%, 15%, 29%, and 37%; and Bennington at Bennington= 30%, 45%, 12%, and 13%. (R.E. Desrosiers).

INSECTS

COLDING MOTH (*Laspeyresia pomonella*) - WASHINGTON - District> County= trap counts: NE> Spokane= adults totaled 370, averaged 4.9 per trap, ranged 0-23 per trap, heavy in over half of reported orchards. (E. Kupferman). WISCONSIN - District> County= adult averages per pheromone trap May 27 to June 4: EC> Fond du Lac= 4.6. (O.L. Lovett). OHIO - District> County= adults in 4 pheromone traps: NE> Wayne and NC> Ashland= 9 caught. (F. Hall). MAINE - County= adults per pheromone trap per week May 26 to June 2: Kennebec= 1.4 at Monmouth. Adult activity and egg laying will continue through fifth cover spray. (A. Gall).

PEACHTREE BORER (*Synanthedon exitiosa*) - KANSAS - First adults of season. District> County= adults in pheromone trap May 25-31: SC> Comanche= first trapped. (G.E. Salsbury).

PEACH TWIG BORER (*Anarsia lineatella*) - COLORADO - District> County= status in peach orchards: Western Slope> Mesa= adults emerged May 22. (D.N. Nees).

EASTERN TENT CATERPILLAR (Malacosoma americanum) - VIRGINIA - Area> status: Statewide> heavy. District> County= status: C> Orange, Amherst, Chesterfield, Goochland, and Powhatan, E> Westmoreland and New Kent, S> Lunenburg, SW> Bland and Wythe, N> Culpeper, and W> Bath, Rockbridge, and Augusta= larval feeding heavy on wild cherry and other fruit trees. (J.L. Garner).

REDBANDED LEAFROLLER (Argyrotaenia velutinana) - MAINE - County= adults per pheromone trap per week: Kennebec= 0.8 at Monmouth. (A. Gall).

PLUM CURCULIO (Conotrachelus nenuphar) - MAINE - County= status on apples: Kennebec= activity heavy at Monmouth with higher temperatures; expected to continue as threat through second cover spray, due to late start. (A. Gall).

BLACK CHERRY FRUIT FLY (Rhagoletis fausta) - NEW YORK - First activity of season. District> County= status: W> Wayne= found in abandoned cherry orchard May 31. (Lienk, Minns).

PEAR PSYLLA (Psylla pyricola) - NEW YORK - Egg laying reported in Hudson Valley. (Ophardt).

EUROPEAN RED MITE (Panonychus ulmi) - MAINE - County= status on apples: Kennebec= rapid summer egg hatch and quickly spreading infestations expected in trees at Monmouth. (A. Gall).

SMALL FRUITS

INSECTS

BLUEBERRY FLEA BEETLE (Altica sylvia) - MAINE - County= larval status on blueberries: Cumberland= damage moderate in about 1 ha in 10-ha field. (A. Gall).

FOREST AND SHADE TREES

DISEASES

A HYPOXYLON CANKER (Hypoxylon atropunctatum) - OKLAHOMA - District> County= prevalence on oaks week ending June 1: SE> Pushmataha, Choctaw, and McCurtain= heavy on dead oaks, found on most oaks in 162-ha block of woods at Antlers, in 4.0 ha homesite at Hugo, and in homesite at Idabel, respectively. Damage ranged from first stages of decline to death of tree. Serious problem in above counties and attempts will be made to identify impact in other counties. (K.E. Conway).

INSECTS

WHITE PINE SAWFLY (Neodiprion pinetum) - OHIO - First of season. District> County= status: NW> Defiance= reported. (L. Ehlers).

SPRING CANKERWORM (Paleacrita vernata) - MINNESOTA - District> County= status of this species and FALL CANKERWORM (Tai sophila pometaria) on elms: EC> Hennepin and Ramsey= defoliation trace to 100% at Minneapolis and St. Paul, about 607.0 ha treated with Bacillus thuringiensis (a larval disease) at Minneapolis. (D. Sreenivasam).

A NOCTUID MOTH (*Lithophane laticinerea*) - OHIO - First large infestation in several decades. District> County= status on red and silver maple: NE> Wayne= larvae 2-3.4 cm long in tree canopies, defoliated 8.1 ha and migrated into an adjacent corn field in western area. Expected to cause 75% defoliation. (D.G. Nielsen).

PERIODICAL CICADA (*Magicicada septendecim*) - NORTH CAROLINA - District> status: Northern Piedmont> Brood II adult damage (pruned tree twigs) peaked, mostly on large oaks, mainly white oaks; adult mortality rapid. (T. Hunt).

MAN AND ANIMALS

INSECTS

HORN FLY (*Haematobia irritans*) - KANSAS - District> County= averages per head on range cattle: SW> Kearny= 150. (M.L. Shuman). WISCONSIN - Adults increased due to warm weather. District> County= counts per side on cattle: WC> Pepin= 20, C> Wood and SC> Jefferson= 0. Heavier on beef; lighter on dairy. (O.L. Lovett).

FACE FLY (*Musca autumnalis*) - WISCONSIN - Adults increased due to warm weather. District> County= averages per face on cattle: WC> Pepin and C> Wood= 2-3 and SC> Jefferson= 0. Heavier on beef; lighter on dairy. (O.L. Lovett). MARYLAND - First adults of season. Area> counts per head June 1 and June 6, respectively: C> 6-15 and 8-20. Excessive rain past 20 days kept populations light. (J.L. Hellman).

STABLE FLY (*Stomoxys calcitrans*) - KANSAS - District> County= average per head on range cattle: SW> Kearny= 7. (M.L. Shuman). WISCONSIN - Adults increased due to warm weather. District> County= counts per side of cattle: WC> Pepin= 5 and C> Wood= 3 and Jefferson= 0. Heavier on beef; lighter on dairy. (O.L. Lovett).

MOSQUITOES - ARKANSAS - Area> status during light trap and land grate surveys for adults: Arkansas Delta> adults, especially *Psorophora columbiæ* and *Anopheles quadrimaculatus*, unusually scarce for time of year, probably due to severe weather. (M.V. Mettsch).

MINNESOTA - Adults slightly below normal at this time compared with previous years in Metropolitan Mosquito Control District. Collections in the district for May 28 to June 6 included larvae identified as *Aedes cinereus* 32%, *Culiseta inornata* 32%, *Aedes vexans* 23%; and adults *Culiseta inornata* 30%, *A. vexans* 14%, and *Culex pipiens* 9%. (D. Sreenivasam). WISCONSIN - Biting problem particularly near major waterways and wetlands statewide. District> County= status: EC> Manitowoc= *Aedes vexans* major biter near cedar swamps. (O.L. Lovett).

AMERICAN DOG TICK (*Dermacentor variabilis*) - WISCONSIN - Area> status: Statewide> still heavy in wooded areas but annoyance to humans worst in northern one-half area. (O.L. Lovett).

BENEFICIAL ORGANISMS & THEIR ENEMIES

INSECTS

CONVERGENT LADY BEETLE (*Hippodamia convergens*) - ARKANSAS - District> County= adult status in alfalfa field: NW> Benton= unusually heavy, averaged up to 1+ per sweep. Associated with heavy *Acyrthosiphon pisum* (pea aphid) infestation. (M.A. Mayse).

A WEEVIL (*Rhinocyllus conicus*) - COLORADO - District> County= status on Carduus nutans (musk thistle): Western Slope> Mesa= at 5 sites and N> Larimer and Jefferson= overwintered adults feeding and few eggs laid on developing flower buds. (C.D. Mowrer et al.).

A MYMARID WASP (*Anaphes flavipes*) - OHIO - District> County= status of Oulema melanopus (cereal leaf beetle) parasitism: C> Fayette= 3% and 4% in 2 oat fields. (G.P. Walker).

AN ICHNEUMONID WASP (*Bathyplectes curculionis*) - OHIO - District> County= status of a parasite of Hypera postica (alfalfa weevil): SC> Pike= 0.01 per sweep from alfalfa. (G.P. Walker).

FEDERAL AND STATE PROGRAMS

DISEASES

First BLACK STEM RUST (*Puccinia graminis*) aecia on barberry in 1979 taken May 14 in Monroe County, WEST VIRGINIA (Bostic), and Dane County, WISCONSIN (Krueger and Leggett). Heaviest infection on barberry in Monroe County, West Virginia, of the last 4 years. (Bostic).

OAT STEM RUST (*Puccinia graminis* f.sp. *avenae*) found in nurseries in Uvalde (Erickson) and Brazos (McDaniel) Counties, TEXAS, in past 2 weeks. Races 1, 2, and 31 identified from collections made April 11 in south Texas commercial fields. (A.P. Roelfs, D.L. Long).

RYE STEM RUST (*Puccinia graminis* f.sp. *secalis*) - WISCONSIN - First infection observed on rye. District> County= prevalence on rye: SW> Grant= trace. (O.L. Lovett).

No WHEAT STEM RUST (*Puccinia graminis* f.sp. *tritici*) north of Dallas, TEXAS, May 17-30. Isolates from stem rust collections made in Obregon nursery, Sonora, MEXICO, in April identified as races 17-HDL and 17-HNL. Races 17-HDC, 151-QFB, 113-RPQ, and 113-RTQ identified in Beeville nursery at Bee, Texas. (A.P. Roelfs, D.L. Long).

For other CEREAL RUSTS see page 372-374.

INSECTS

CEREAL LEAF BEETLE (*Oulema melanopus*) - OHIO - Adults scarce on wheat in southern area. District> County= status: SC> Adams= heavy on oats in 1 field; C> Franklin and Ross, and SC> Scioto= adults light on corn; larvae heaviest in oat fields and adults still laying eggs, most larvae in wheat near maturity; and SC> Brown= larval damage on 86% of plants while nearly full-grown larvae on 10% of plants indicated pupation. Populations on small grains. (G.P. Walker):

District> County	Eggs per stem	Larvae per stem	Adults per stem	Crop	Host stage
SW> Warren	less than 0.03	0.13	0.01	wheat	ripening
SW> Clermont	less than 0.03	less than 0.03	less than 0.01	wheat	flowering
SW> Clermont	less than 0.03	0.37	0.01	wheat	flowering
SC> Brown	less than 0.03	0.10	less than 0.01	wheat	ripening
SC> Brown	less than 0.03	less than 0.03	less than 0.01	wheat	ripening
SC> Adams	0.73	0.97	1.82	oats	1 node
SC> Scioto	less than 0.03	less than 0.03	0.01	wheat	ripening

MARYLAND - Area> status: C> cereal leaf beetle larvae averaged 6 per stem on oats, heaviest since introduction into State, above normal on wheat, with about 1,000 ha treated past 10 days, flag leaf damage in untreated field ranged 30-60% defoliated, damage expected to increase next 7-10 days; Eastern Shore> larvae 0.25-2 per stem on oats, damage on wheat expected to peak in 5 days. (J.L. Hellman). NEW YORK - District> County= larval status on oats: C> Cayuga= 4 per 2,700 sweeps in 9 fields sampled in southern area. (Sawyer).

GRASSHOPPERS - CALIFORNIA - District> County= Melanoplus devastator status: San Joaquin Valley> San Joaquin= only early instars, averaged 20 per 0.8 sq m on rangeland east of Stockton and 50 per 0.8 sq m northeast of city (J. Hogden, D. Thomson); destroyed 12 ha of tomatoes near Stockton (K. Brown), only early instars, no adults. (J. Hogden, D. Thomson).

WASHINGTON - Heavy grasshopper populations developed in several areas. District> County= status of Melanoplus sanguinipes and others: C> Klickitat= 1st and 2nd instar nymphs up to 100 per 0.8 sq m, hatch still underway on 40,468.7 ha from Goodnoe Hills east of Benton County; Yakima= 1st and 2nd instar nymphs up to 50 per 0.8 sq m, heavy infestation unusual for area, on 40,468.7 ha near Terrace Heights and Moxie areas; SE> Asotin and EC> Grant= heavy near Cooley City and Quincy and Ephrata. (D. Jackson, A. Retan).

KANSAS - Grasshopper hatch continued. District> County= status week ending June 1: SW> Kearny= mostly 2nd instar Ageneotettix deorum and Melanoplus sanguinipes averaged 10-20 per 0.8 sq m of rangeland, and Gr-J, Ford, and Seward= probably Melanoplus bivittatus and M. sanguinipes averaged 10 per 0.8 sq m in road ditches and other waste areas (M.L. Shuman); SE> Crawford= large numbers of mostly small M. bivittatus nymphs in spots in waste areas and Neosho= up to 50 per 0.8 sq m at 1 site in waste area along Neosho River (G.A. Salsbury); EC> Wabaunsee= M. sanguinipes (29%), Melanoplus differentialis (45%), and M. bivittatus (25%) nymphs, in spots along sorghum field margin, Lyon= small nymphs of M. sanguinipes (20%), M. differentialis (63%), and M. bivittatus (16%) heavy along wheat field margin at 1 location (K.O. Bell, Jr. et al.), Douglas= small M. differentialis, M. bivittatus, and M. sanguinipes nymphs, in order of decreasing abundance, heavy in small area in waste situation near garden (S.C. White, J.D. Lambley).

Kansas - District> County= current grasshopper status per 0.8 sq m unless stated otherwise on rangeland: SW> Kearny= 4-35 (averaged 17) in 20 areas, hatch almost completed, heaviest in best grazing areas, Ageneotettix deorum, Phlibostroma quadrimaculatum, and Melanoplus sanguinipes major species; WC> Scott= fewer than 1 and Logan= 1; NW> Rawlins= up to 4 and Cheyenne= 6-18 (M.L. Shuman); and SC> Pratt= 30, Barber= 10, Comanche= 10-25, and Kiowa= 5-25, A. deorum, P. quadrimaculatum, and Melanoplus spp. most often major species in last 4 counties, hatch still underway, mostly 1st to 3rd instars (G.A. Salsbury). Status along field margins and road ditches: NW> Rawlins and Cheyenne= mostly Melanoplus bivittatus and M. sanguinipes averaged 2 and 8-23 per 0.9 m, respectively (M.L. Shuman); SC> Pratt= averaged 5-10 per 0.9 m Kiowa= 15-35 per 0.9 m near corn, Comanche= 15 per 0.9 m, mostly A. deorum, M. bivittatus, Melanoplus spp. (G.A. Salsbury); SW> Hamilton= averaged 40-50 per 0.8 sq m in spots in road ditches near Syracuse, mostly 1st and 2nd instars (D.E. Mock); SC> Kiowa= M. bivittatus and Melanoplus confusus averaged 10 per 0.8 m 14 m into wheat field, leaf feeding noticeable (G.A. Salsbury); NE> Leavenworth= averaged 4 per 0.3 row m with damage light to margin rows of soybeans [2 leaf] (B.D. Hilbert); and NW> Cheyenne= averaged 3-4 per 0.8 sq m in 2 alfalfa fields (M.L. Shuman).

NEBRASKA - Mostly Melanoplus sanguinipes, Melanoplus bivittatus and Ageneotettix deorum week ending May 31. Majority of nymphs in 1st or 2nd instar (Campbell et al.). District> County= status: N> Blaine= egg pods averaged 7-8 eggs, eye spot or segmented, per pod May 25 (Strasia), McPherson and Logan= Melanoplus sanguinipes and M. bivittatus nymphs averaged 30+ per 0.8 sq m in grassy borders of alfalfa fields May 29 (Campbell, J. Buck); and NW> Sioux and Dawes= ranged up to 40 per 0.8 sq m of rangeland; mostly A. deorum and Amphitornus coloradus May 24; egg hatch seems nearly complete in above 5 counties (Hagen). Rangeland survey results (Campbell et al.):

District> County	Range per 0.8 sq m	Average per 0.8 sq m	Sites
N> McPherson	up to 30	less than 5	7
N> Logan			11
East	3-5	4	
West	15-30	22	
N> Blaine		30.0	4
C> Custer	0-8	1.5	18
SW> Lincoln	1-11	5.4	5
SW> Perkins	0-12	2.0	4
SW> Chase	0-7	2.0	3

NORTH DAKOTA - Grasshopper hatch just underway. First instar Melanoplus bivittatus up to 9 per 0.8 sq m in margin of soybeans, up to 2 per 0.8 sq m in field. District> County= status on sunflowers: SE> Richland, Ransom, and Dickey= feeding light, Ransom= Melanoplus confusus in marginal areas of field. (W.J. Brandvik, C.G. Scholl).

JAPANESE BEETLE (Popillia japonica) - TENNESSEE - District> County= status: East Tennessee> Bount= 9 adults in traps last week in Happy Valley. (W. Millington). NEW YORK - First adult activity of season few weeks earlier than normal. District> County= adults: S> Tompkins= observed May 23-29. (Zepp).

SCREWWORM (Cochliomyia hominivorax) - Total of 14 cases reported from continental United States May 13-26 as follows: Texas 6, New Mexico 1, and Arizona 7. Total of 475 cases confirmed in portion of eradication zone in Republic of Mexico. Total of 442 cases reported in Mexico south of eradication zone. Number of sterile flies released this period totaled 74,572,245 as follows: Texas 44,982,645; New Mexico 6,168,000; Arizona 22,681,600; California 740,000. Total of 147,764,945 sterile flies released within eradication zone of Mexico. (J.E. Novy, M.E. Meadows).

HAWAII PEST REPORT

New State Record - A total of 11 females and 7 males of a PYRALID MOTH (Ephestia albicostalis) collected at light at residence in Kalihi Valley (Honolulu), Oahu Island, September 27, 1978, to April 19, 1979, by F.G. Howarth. Determined by K. Sattler and M. Shaffer. No information about its host or biology known at present. (F.G. Howarth).

General Vegetables - TOMATO PINWORM (Keiferia lycopersicella) infestations and damage severe on 464.5 sq m of tomato (75% of fruits infested) at Hoolehua, Molokai. (L.M. Nakahara).

Ornamentals - New host record for a WHITEFLY (Paraleyrodes naranjae). All stages very heavy on large Hibiscus tiliaceus (sea hibiscus) tree at Kaunakakai, Molokai. New host record for a LADY BEETLE' (Coelophora pupillata) in State. Larvae and adults fed on P. naranjae on sea hibiscus tree at Kaunakakai. (L.M. Nakahara).

DETECTION

NEW STATE RECORD

INSECTS

A PYRALID MOTH (Ephestia albicostalis) - HAWAII - Oahu. (p. 392).

NEW COUNTY RECORDS

DISEASES

SOUTHERN RUST (Puccinia polysora) - INDIANA - Martin and Dubois. (p. 367).

INSECTS

POTATO STEM BORER (Hydroecia micacea) - NEW YORK - Cayuga and Oswego. (p. 370).

WEEDS

BELLARDIA (Bellardia trixago) - CALIFORNIA - District> County= collection data: Central Coast> San Luis Obispo= specimen collected from rangeland near San Luis Obispo by B. Lilley, May 24, 1979. Determined by D. Barbe. (C.S. Papp).

A THISTLE (Cirsium crassicaule) - CALIFORNIA - District> County= collection data: San Joaquin Valley> Kings= specimen collected from river bank near Corcoran by J. Dunnicliff, May 10, 1979. Determined by T. Fuller. (C.S. Papp).

CORRECTIONS

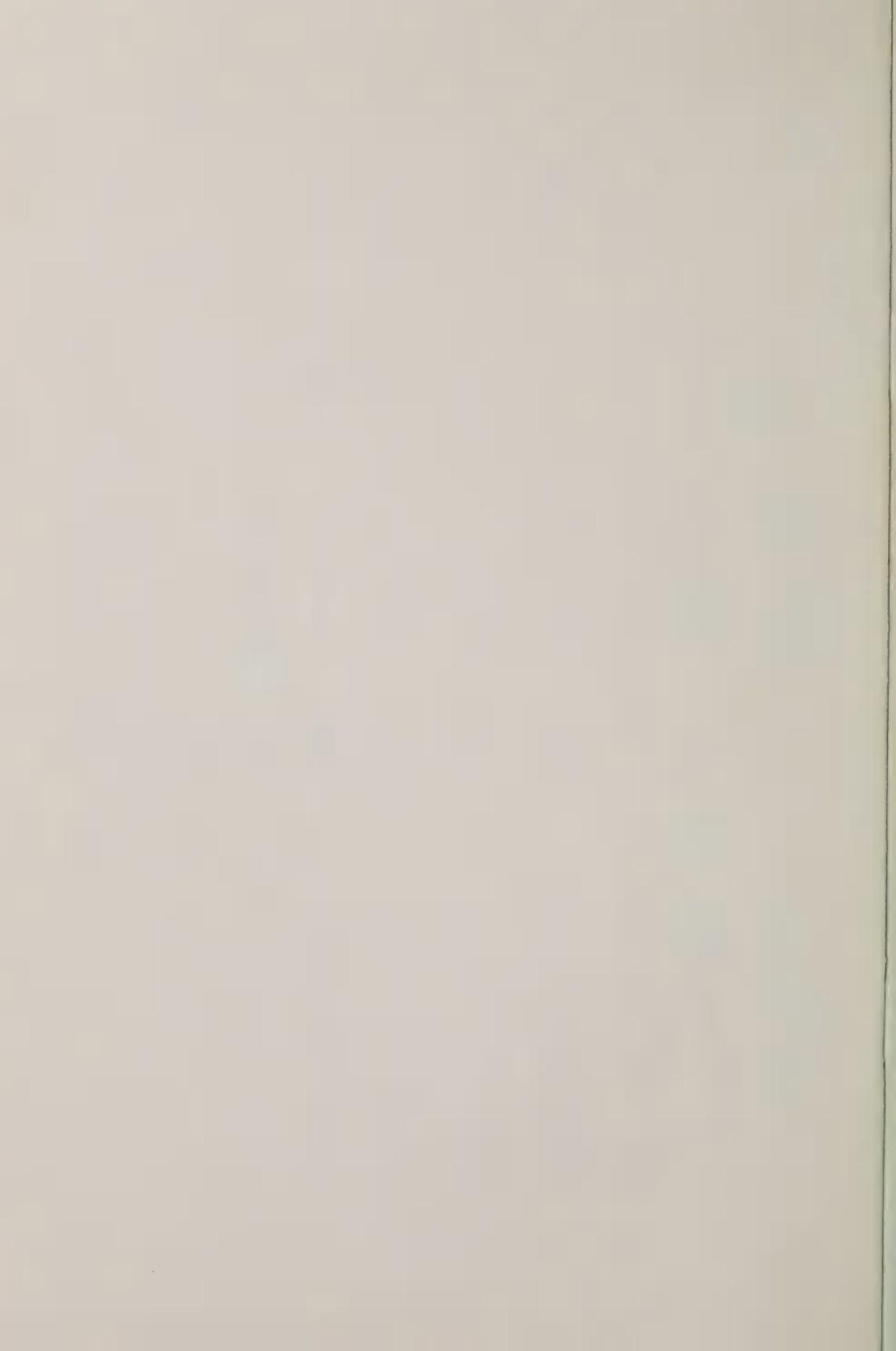
CPPR 4(15):227, 228, and 239 - All credits with D. Long should read D.L. Long.

LIGHT TRAP COLLECTIONS

Pest Interceptions of Quarantine Significance at Ports of Entry

Plant Importation and Technical Support Staff
Plant Protection and Quarantine Programs, USDA

<u>Life Stage</u>	<u>Host</u>	<u>Probable Origin</u>	<u>Port of Entry</u>	<u>Desti-nation</u>
<u><i>Copturus</i> sp.</u> a weevil Det. D.R. Whitehead	larval pupal adult	in <u><i>Swietenia</i></u> logs from cargo	Honduras	Tampa
<u><i>Hyllusops palliatus</i> (Gyllenhal)</u> a scolytid beetle Det. D.M. Anderson	larval adult	in Dunnage	Romania	Goldsboro
<u><i>Phaedon</i> sp.</u> a chrysomelid beetle Det. R. White	adult	on stems of dried flowers	Brazil	Jacksonville
<u><i>Phragmataecia castaneae</i> (Hubner)</u> a cossid moth Det. D.M. Weisman	pupal	in reed mats from cargo	Hungary	Houston
<u><i>Trogoderma granarium</i> Everts</u> khapra beetle Det. J.M. Kingsolver	larval pupal	on bags of gum arabic from cargo	Sudan	Philadelphia
<u><i>Urocerus gigas</i> (Linnaeus)</u> a siricid wasp Det. R. Carlson	adult	in wood crates with silico manganese	France	Baltimore
<u><i>Helicella conspurcata</i> (Draparnaud)</u> a helicid snail Det. R. Munkittrick	adult	on aircraft engines from cargo	Italy	Norfolk
<u><i>Pallifera costaricensis</i> (Morch)</u> a slug Det. R. Munkittrick	adult	on leaves of <u><i>Chamaedorea</i></u> from cargo	Guatemala	Houston



METRIC CONVERSION

1 cm = 0.393701 in
1 m = 3.28084 ft = 1.09361 yd
1 km = 0.621371 mi
1 sq cm = 0.155000 sq in
1 sq m = 10.7639 sq ft = 1.19599 sq yd
1 ha = 2.47104 acres
1 sq km = 0.386101 sq mi
1 kg = 2.20462 lb
1 t (metric ton) = 1.10231 short ton
1 kg/ha = 0.892183 lb/acre
1 t/ha = 0.446091 ton/acre

UNITED STATES DEPARTMENT OF AGRICULTURE
Animal and Plant Health Inspection Service
Hyattsville, Maryland 20782

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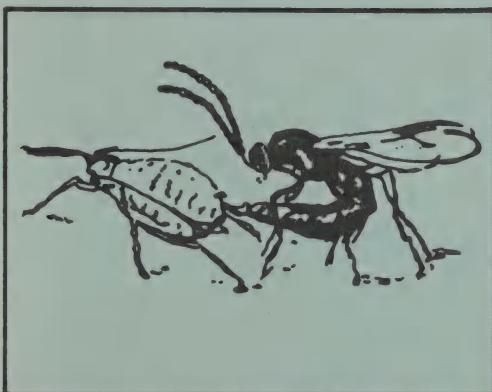
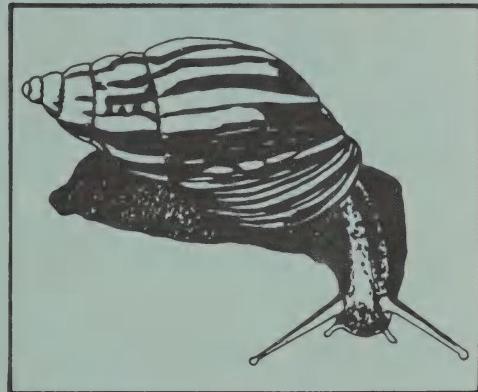


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Cooperative PLANT PEST REPORT

U.S. June 22, 1979
DEPARTMENT OF AGRICULTURE Vol. 4
Animal and Plant No. 22
Health
Inspection Service 23 '82

SEARCHED INDEXED
CURRENT SERIAL RECORDS



This publication is distributed weekly to Federal and State agencies, universities, farmers, and others interested in containing or controlling pests in the United States.

Data included in this publication are compiled from reports submitted by cooperating State, Federal and other agricultural and industrial specialists. Accuracy of the reports is not verified prior to publication.

Cooperative Plant Pest Report supersedes *Cooperative Economic Insect Report*, which was discontinued with Volume 25, Numbers 49-52, 1975.

Correspondence should be directed to:

CPPR

New Pest Detection and Survey Staff
Plant Protection and Quarantine Programs
Animal and Plant Health Inspection Service
U.S. Department of Agriculture
Federal Building #1
Hyattsville, Maryland 20782

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COOPERATIVE PLANT PEST REPORT**HIGHLIGHTS**Current Conditions

GREENBUG treatments applied for sorghum in parts of eastern two-thirds of Kansas. Increased in southeastern one-half of Nebraska. (p. 399).

WHEAT LEAF RUST prevalence 100% on commercial wheat in parts of southern one-half of Illinois. (p. 400).

BARLEY LOOSE SMUT prevalence increased on barley in Minnesota. (p. 400).

SPECKLED LEAF BLOTCH prevalent on some commercial wheat in southern one-half of Illinois. (p. 400).

Losses heavy in winter wheat in South Dakota due to a WINTER KILL COMPLEX. (p. 401).

ALFALFA WEEVIL damage serious on alfalfa regrowth in parts of northwestern Illinois and in southern one-half of Wisconsin. (p. 403-404).

Aecia heavier than usual on barberries in upper Midwest. (p. 408).

Northward movement of WHEAT STEM RUST slowest in years. (p. 409).

Predictions

Damage by first generation EUROPEAN CORN BORER expected to be severe on corn in western area of Illinois. Only earliest planted corn in southern Wisconsin will be susceptible by late June. Control level to be reached by late June in Middle Tennessee. (p. 397).

GRASSHOPPER infestations on western rangeland predicted to be heaviest since 1958. (p. 410).

Detection

For new county records see page 412.

Some First Occurrences of the Season

MAIZE DWARF MOSAIC VIRUS in West Virginia. SOUTHWESTERN CORN BORER in Kansas. WHEAT LEAF RUST in North Dakota. ALFALFA SEED CHALCID in Nevada. MEADOW SPITTLEBUG in Wisconsin. TAN SPOT on wheat in North Dakota. TOBACCO BUDWORM larvae in Maryland. JAPANESE BEETLE in Ohio.

Reports in this issue are for the week ending June 15 unless otherwise indicated.

CONTENTS

Corn, Sorghum, Sugarcane	
Diseases.....	397
Insects.....	397
Small Grains	
Diseases.....	399
Insects.....	402
Turf, Pastures, Rangeland	
Diseases.....	403
Weeds.....	403
Forage Legumes	
Insects.....	403
Soybeans	
Insects.....	404
Peanuts	
Insects.....	405
Cotton	
Insects.....	405
Beneficial Organisms and Their Enemies	
Insects.....	408
Federal and State Programs	
Diseases.....	408
Insects.....	409
Detection.....	412
Light Trap Collections.....	413
Pest Interceptions of Quarantine Significance at Ports of Entry.....	415

CORN, SORGHUM, SUGARCANE

DISEASES

STEWART'S WILT (Erwinia stewartii) - OHIO - District> County= status: SE> Washington= detected in sweet corn, transmitted by CORN FLEA BEETLE (Chaetocnema pulicaria). (W. Lyon).

MAIZE DWARF MOSAIC VIRUS - WEST VIRGINIA - First of season. District> County= prevalence in corn June 6: SW> Jackson= in few plants at 2 locations. (R.L. Williams).

INSECTS

EUROPEAN CORN BORER (Ostrinia nubilalis) - NEBRASKA - Area> status: SE> adults decreased, probably due to hot, dry windy weather. (Cranfill et al.). ILLINOIS - Area> status on corn: Southern one-third of State> egg laying completed and hatch well underway; C> adult emergence completed and egg laying underway; WC> hatch about 50% completed; N> adult emergence about 40% completed (W. Reynolds); as far north as W district> Hancock County= whorl feeding damage. Damage by first generation expected to be severe (K.L. Steffey).

WISCONSIN - First European corn borer adult flight peaked in southern area. Eggs laid on taller corn by June 11. Corn planted early on sandy soils may be susceptible to larval infestation by June 20. Damage could be heavy in earliest planted fields. Based on degree-days, first adult flight should have peaked in Madison area June 11, as degree-days above modified base 10°C reached 351. District> County= status on corn: SC> Dane= empty pupal cases 76% and pupae 24% in stalks near Oregon; SW> Sauk at Spring Green, and Richland at Lone Rock= eggs laid on tall volunteer corn June 11. All fields too short to support larvae but by June 20 some earlier planted fields should be nearly 91 cm tall (extended leaf height). (O.L. Lovett).

TENNESSEE - District> County= percent cornstalks [host stage] infested by European corn borer: Central Basin> Bedford= 30% [101 cm tall] in 32-ha field, and Marshall= 20% [121 cm tall] in 80.9-ha field; Western Rim> Lawrence= 30% [91 cm tall] in 1 field; and Middle Tennessee area> egg masses to 2nd instar larvae on 50% [76 cm tall] in 2 experimental fields, treatment about to begin, spot checks negative in these 2 fields 2 weeks ago. With suitable weather, these fields will probably reach control level in 5-6 days. (M. Cooper et al.).

KENTUCKY - European corn borer increased rapidly and several fields in southern area above economic threshold. District> County= status on corn: Midwestern> Christian= leaf feeding noticeable in 26 of 48 fields (1,052 ha), infestation averaged 40% in 26 fields, treatment recommended for 10, Logan= damage averaged 25-30% in 35 fields (554.4 ha), treatment recommended for 9 fields, and Todd= infested average of 27% of plants in 119 fields (2,621 ha), treatment recommended for 28 (814.2 ha); more northern counties of C> Hardin, and Midwestern> Henderson and Union= populations increased, damage still below economic threshold. (P.E. Sloderbeck et al.).

OHIO - European corn borer adult catches still heavy. District> County= status on corn: SW> Butler= 1st instar larvae detected; SC> Pike= 1st instar damage on 3% of plants (B. Blair, B. Eisley); SE> Washington (W. Lyon)= larval feeding less than 1%; and NC> Ashland= adult and 1 egg mass observed, no feeding damage (G.P. Walker).

NORTH CAROLINA - Area> European corn borer status on corn: Coastal Plain> infested almost every field, larvae 1+ on less than 5-75% of plants. In field corn, control very limited once stalk boring underway. (T.N. Hunt). MARYLAND - Area> status on corn: Statewide> well below normal on field corn, damaged plants ranged 20-30%; sweet corn damage levels on early planted corn ranged 40-80% infested with 809.4 ha treated. (J.L. Hellman).

SOUTHWESTERN CORN BORER (Diatraea grandiosella) - KANSAS - First of season. District> County= status: NC> Stafford= eggs trace and 1st instar larvae noted in 1 corn field. (F.L. Poston).

BLACK CUTWORM (Agrotis ipsilon) - IOWA - Activity of this species and DINGY CUTWORM (Feltia ducens) still light to moderate with isolated severe infestations. District> County= percent corn plants with leaf feeding in number of fields (f) and percent plants cut in number of fields (f): C> Polk= 2-18% in 5f and 8% in 1f, Dallas= 1-22% in 4f and no cut plants observed, Jasper= 7-9% (no data) and 1% in 1f, and Story= 6-21% in 5f and 7+% in 3f. Status on corn: SC> Union= damaged 3 fields and NW> Palo Alto= about 40 ha replanted in 1 field. (L.H. Townsend, F. Pearsall).

KENTUCKY - Black cutworm problem much less than in past week. District> County= status on corn: C> Hardin= infested 3 of 21 fields (27 of 227 ha) but not economic and Midwestern> Henderson= 2 of 126 fields (33 of 235 ha) required treatment. (P.E. Sloderbeck et al.). OHIO - First generation adult flight seemed to be ending. Second generation adult flight expected in 14 days. District> County= status on corn: NE> Wayne= 1 adult taken in 3 pheromone traps (D. Woods); SE> Muskingum, NE> Wayne (G.P. Walker) and C> Morrow (W. Lyon)= damage less than 1%, and Licking= pupation began (G.P. Walker).

CORN EARWORM (Heliothis zea) - NEW MEXICO - District> County= status on corn: SE> Eddy= eggs on 60-80% of plants. Beneficial insects seemed to aid in controlling hatching larvae. (L. Gholson). KANSAS - District> County= larvae in corn whorls: EC> Shawnee and Douglas= trace. (K.O. Bell, Jr.). FLORIDA - District> County= damage to sweet corn: C> Alachua= damaged 80-90% of ears on late-planted, unsprayed plants at Alachua. (E.R. Mitchell).

FALL ARMYWORM (Spodoptera frugiperda) - FLORIDA - District> County= status on sweet corn: C> Alachua= damage very light at Alachua, adults averaged 3-5 males per night per pheromone trap. (E.R. Mitchell).

ARMYWORM (Pseudaletia unipuncta) - KENTUCKY - District> County= status on corn: Bluegrass> Clark= damage continued in few scattered fields, 8.1-ha fields required treatment, generally population between generations and no problem. (R.A. Scheibner, P.E. Sloderbeck).

STALK BORER (Papaipema nebris) - WEST VIRGINIA - District> County= larvae on corn: E> Jefferson and Berkeley= damage in several corn [3 to 4-leaf] fields of sod-seeded corn. A 36-ha field with 90% infested plants was replanted. (S. Washburn). MARYLAND - Infested additional 404.7 ha of corn from previous period, damage seemed light (2-14% infestations). (J.L. Hellman).

SUGARCANE BEETLE (Eutheola rugiceps) - TENNESSEE - District> County= status on corn: Western Rim> Lawrence= adult damage to immature stalks reduced 2-ha plot by about 75%. (M.E. Cooper).

CORN FLEA BEETLE (Chaetocnema pulicaria) - See STEWART'S WILT, page 397.

GREENBUG (*Schizaphis graminum*) - KANSAS - Area> status: Eastern two-thirds> flights continued into sorghum [seedling] and treatments applied. District> County= status on sorghum: EC> Shawnee and Douglas, and NE> Jefferson= weekend rains reduced populations over much of infested area (B.D. Hilbert, K.O. Bell, Jr.), Riley= 25 per plant [emerging] June 7, 50 per plant June 10, and 100-200 per plant June 13 with serious injury; C> Dickinson, Saline, and McPherson, and NC> Harvey= threatening to severe numbers (H.L. Brooks), and Reno and surrounding counties= some stands lost and replanted (R.J. Bauernfeind); SE area> heavy on seedlings, some fields treated then reinfested, up to 2,000 per plant [8-10 cm tall] (G.E. Lippert); EC> Shawnee= averaged 1,000+ per plant (H.D. Garwood); and SW> Ford= averaged 17 (3-8 winged) per plant [8 cm tall] (J.R. VanKirk), Seward, Stevens, Grant, and Morton= averaged 0-3 per plant in 4 fields [5-8 cm tall] (M.L. Shuman).

NEBRASKA - Greenbug increased on sorghum throughout southeastern one-half of State. District> County= counts (averages) per infested plant [host stage], percent plants infested, and number of fields (f): S> Webster= about 5% winged, 2-25 (3 and 10) [2-3 leaf], 95% and 100% in 2f, and Adams= 0-15 (4) [2-3 leaf], 10% in 1f (Peters); and SE> Nuckolls= up to 12 colonies (4-5 colonies) [8 cm tall], 80% in most fields in 25f (Hawley, Andersen).

GRASSHOPPERS - ILLINOIS - Area> status: Statewide> populations heavy and severe problems expected if weather remains hot and dry. Many nymphs in fence rows, ditchbanks, and field edges next to corn. (K.L. Steffey).

SMALL GRAINS

DISEASES

Improved weather May 30 to June 12 in northern Great Plains States allowed spring grain planting to proceed rapidly and near completion. Late planting of small grains in upper Midwest made grain more vulnerable to disease, drought, weeds, and adverse harvest weather. Harvest of winter wheat started last week in north-central Texas, 2 weeks later than normal. Winter wheat crop in good to excellent shape and with good harvesting weather, above average yields expected. Lack of moisture not major problem in most small grain areas of the United States at the present time. (A.P. Roelfs, D.L. Long).

WHEAT LEAF RUST (*Puccinia recondita* f.sp. *tritici*) severe in few commercial fields in northern TEXAS with 100% severities on 'TAM-W-103', May 30 to June 12; normal severities only 40%. (Johnson). In last 2 weeks rust increased little in northern OKLAHOMA and southern KANSAS. (Eversmeyer). No further increase expected due to crop maturity. Traces observed in MISSOURI (Foudin), IOWA (Williams), WASHINGTON (Line), and CALIFORNIA (Qualset).

NEBRASKA - Wheat leaf rust in most wheat fields in southern three-fifths of State. (S. Poe, J. Watkins).

District	Prevalence (%)	Severity (%)	Host stage
SE>	trace	trace	one-half berry
E>	trace	trace	one-half berry
C>	0 to trace	0 to trace	flowering
S>	trace	trace	one-half berry
SW>	trace	trace	flowering
NW>	0	0	flowering

NORTH DAKOTA - First wheat leaf rust of season. District> County= status on winter wheat [boot]: EC> Cass= trace in experimental plots at Casselton, June 14. (J.D. Miller). ILLINOIS - District> County= prevalence/severity on wheat leaves [host stage] in 1 commercial field each, week of June 4: ESE> Effingham= trace/trace [full kernel], Fayette= 100%/1% [full kernel], and Marion= 100%/3% [early dough]; WSW> Bond= 100%/4% [three-fourths kernel], and Madison= 100%/20% [milk]; and SW> St. Clair= 100%/25% [milk], Monroe= 100%/12% [milk], Randolph= 100%/20% [early dough], Jackson= 100%/5% [early dough], Union= 100%/4% [early dough], Pulaski= 100%/15% [mid-dough], Perry= trace/trace [early dough], Washington= 100%/3% [early dough], and Clinton= 100%/15% [late milk]. (E.G. Jordan).

WHEAT STRIPE RUST (*Puccinia striiformis*) in Douglas County, KANSAS, field May 30 to June 12. Unusual in Kansas except in years with cool springs. Scarce on winter wheat in Pacific Northwest, but some may occur in few irrigated fields of susceptible spring wheat. (A.P. Roelfs, D.L. Long).

OAT CROWN RUST (*Puccinia coronata* var. *avenae*) trace in oat plot in southern KANSAS, May 30 to June 12. (Eversmeyer). Severity moderate on cultivar Wauken in plots in northern TEXAS. (Gardenhire). Sporadic rains favored continued pycnial infection from germinating teliospores on straw in buckthorn nursery at St. Paul, MINNESOTA. First aeciospore released June 6 at the buckthorn nursery. Aecia on buckthorns in IOWA and WISCONSIN. (A.P. Roelfs, D.L. Long).

LOOSE SMUT (*Ustilago nuda*) - NEBRASKA - In few wheat fields in some counties. District> County= prevalence: E> Lancaster and Cass, and SE> Otoe and Johnson= trace. (S. Poe). ILLINOIS - District> County= prevalence on wheat heads [host stage] in 1 commercial field each, week of June 4: ESE> Fayette= trace [full kernel] and SW> Washington= trace [early dough]. (E.G. Jordan). WISCONSIN - District> County= prevalence on winter wheat heads: SC> Dane, Rock, and Dodge, and EC> Winnebago and Fond du Lac= trace, 17% in Dane County field and 10% in Dodge County field. (O.L. Lovett).

BARLEY LOOSE SMUT (*Ustilago nigra*) - MINNESOTA - Prevalence increased on barley in 1978. Results of laboratory tests for last 3 barley crops (D. Sreenivasam):

	1978	1977	1976
Number of samples	426	603	624
Average % smut	3.6	3.1	1.2
Highest % smut	23	19	10
% samples suitable for seed without treatment	68	69	95

SPECKLED LEAF BLOTCH (*Septoria tritici*) - NEBRASKA - Area> prevalence/severity on wheat: Statewide> mostly trace/light on upper 3 leaves, moderate for plant (4.5-6.5 on Saari and Prescott scale), common on lower leaves in most fields. (S. Poe, J. Watkins). ILLINOIS - District> County= prevalence/severity on wheat leaves [host stage] in 1 commercial field each, week of June 4: ESE> Effingham= 100%/18% [full kernel] and Fayette= 100%/20% [full kernel]; WSW> Bond= 100%/12% [three-fourths kernel] and Madison= 100%/18% [milk]; SW> St. Clair= 100%/15% [milk], Monroe= 100%/35% [milk], Randolph= 100%/40% [early dough], Jackson= 100%/35% [early dough], Union= 100%/40% [early dough], Pulaski= 100%/50% [mid-dough], Perry= 100%/20% [early dough], Washington= 100%/15% [early dough], Clinton= 100%/20% [late milk]; and ESE> Marion= 100%/25% [early dough]. (E.G. Jordan).

SEPTORIA GLUME BLOTCH (Leptosphaeria (Septoria) nodorum) - OKLAHOMA - District> County= status on 'TAM 101' wheat week ending June 8: EC> Muskogee= first report. (K.E. Conway).

WHEAT POWDERY MILDEW (Erysiphe graminis f.sp. tritici) - ILLINOIS - District> County= prevalence/severity on wheat leaves [host stage] in 1 commercial field each, week of June 4: SW> Union= 10%/trace [early dough], and Pulaski= trace/trace [mid-dough]; and ESE> Marion= 100%/30% [early dough]. (E.G. Jordan).

TAN SPOT (Pyrenophora trichostoma) - NEBRASKA - Area> prevalence/severity on wheat: Statewide> trace/light on upper 3 leaves, moderate for plant (4-6 on Saari and Prescott scale), common on older leaves in many fields. (S. Poe, J. Watkins). SOUTH DAKOTA - Area> prevalence on winter wheat [heading]: W> occasional symptoms, minimal due to hot, dry weather. (V.L. Jons). NORTH DAKOTA - First of season June 11. District> County= prevalence/severity on lower leaves of winter wheat [boot]: SW> Adams= 50%/trace to 50%. (V.L. Jons).

CEPHALOSPORIUM STRIPE (Cephalosporium gramineum) - ILLINOIS - District> County= prevalence on wheat [host stage] in 1 commercial field each, week of June 4: ESE> Effingham, Fayette, and Marion= trace to 2% [full kernel to early dough]; WSW> Bond and Madison= trace to 1% [three-fourths kernel to milk]; and SW> St. Clair, Monroe, Perry, and Washington= trace to 2% [milk to early dough]. (E.G. Jordan).

SCAB (Fusarium spp.) - ILLINOIS - District> County= prevalence on wheat heads [host stage] in 1 commercial field each, week of June 4: ESE> Effingham= trace [full kernel], and Marion= 1% [early dough]; WSW> Madison= trace [milk]; and SW> St. Clair= 4% [milk], Monroe= 8% [milk], Randolph= 6% [early milk], Jackson= 9% [early dough], Union= 10% [early dough], Pulaski= 30% [mid-dough], Perry= 1% [early], Washington= 1% [early dough], and Clinton= 1% [late milk]. (E.G. Jordan).

A LEAF SPOT (Fusarium spp.) - NEBRASKA - Prevalence on wheat [flowering to one-half berry]: District> County= NW> Scotts Bluff and S> Harlan= trace to 5%. (S. Poe).

A WINTER KILL COMPLEX (Pythium sp., Fusarium sp., and Helminthosporium sp.) - SOUTH DAKOTA - This complex and environmental conditions contributed to winter wheat damage. About 40% of wheat acreage (162,000 ha) abandoned and replanted to spring grains. Substantial economic losses occurred due to added cost of re-planting to spring-planted crops. (V.L. Jons).

HALO BLIGHT (Pseudomonas coronafaciens) - WISCONSIN - District> County= status on oats: C> Adams and EC> Fond du Lac= most common disease on oats, affected 5% of leaf surface in some heavily infected areas of fields. (O.L. Lovett).

WHEAT STREAK MOSAIC VIRUS - SOUTH DAKOTA - One of most prevalent diseases of winter wheat statewide. (V.L. Jons).

District> County (fields)	Prevalence (%)	Severity	Host stage
SC> Lyman (5f)	less than 1	mild	boot to heading
SC> Lyman (2f)	less than 70	moderate	boot to heading
SC> Jones	less than 1-10	moderate	boot to heading
SC> Mellette	less than 1-20	moderate	boot to heading
SC> Tripp	less than 1-50	moderate	boot to heading

District> County (fields)	Prevalence (%)	Severity	Host stage
WC> Jackson (1f)	trace	moderate	boot to heading
WC> Jackson (1f)	90	severe	boot to heading
WC> Meade	less than 1	mild	boot to heading
WC> Pennington	less than 1	mild	boot to heading
WC> Haakon	less than 1	mild	boot to heading
WC> Stanley	less than 1	mild	boot to heading
SW> Bennett	less than 1-10	moderate	heading to flowering
SW> Fall River	less than 1	mild	heading to flowering
SW> Shannon	less than 1-20	moderate	heading to flowering
NW> Ziebach	less than 1	mild	boot to heading
NW> Harding	less than 1	mild	heading

NORTH DAKOTA - Area> symptoms of wheat streak mosaic virus on winter wheat: SW> trace. (V.L. Jons).

BARLEY YELLOW DWARF VIRUS - ILLINOIS - District> County= prevalence on wheat [host stage] in 1 commercial field each, week of June 4: ESE> Effingham, Fayette, and Marion= trace [full kernel to early dough]; WSW> Bond and Madison= trace [three-fourths kernel to milk]; and SW> Monroe, Randolph, Jackson, Union, Perry, and Clinton= trace [milk to early dough]. (E.G. Jordan). WISCONSIN - District> County= prevalence on oats: C> Adams and Waushara, EC> Fond du Lac, and SC> Greene= reddened leaves on isolated plants and tillers. (O.L. Lovett).

INSECTS

ARMYWORM (*Pseudaletia unipuncta*) - KANSAS - Reports of damage to small grains declined. District> County= status: EC> Wabaunsee and Chase= pupation well underway in brome hay meadows; C> Dickinson= pupae averaged 11 and 8 per 0.3 row m in 2 treated, previously heavily infested wheat [dough] fields near Herington, larvae killed by *Apanteles militaris* (a braconid wasp) averaged 1-3 per 0.3 row m in these 2 fields, large larvae averaged 2 (ranged 0-12) per 0.3 row m [milk], EC> Geary and C> Dickinson and Marion= larvae trace and adults of no significance on most wheat checked (K.O. Bell, Jr.), and Saline= defoliated 1 wheat field, clipped beards and some heads from shortest tillers (H.L. Brooks). WISCONSIN - District> County= larvae per 0.8 sq m of winter wheat: SC> Rock= larvae light in lodged portion of field, averaged 2. (O.L. Lovett). OHIO - Larvae present in most wheat fields examined, none in oats. District> County= counts per 0.3 row m of wheat: SE> Muskingum= larvae 1.9 in 1 wheat [ripening] field (all stems examined had flag leaves completely eaten); and 0.8 in second field; EC> Coshocton= 0.5; and NE> Stark= 0.2. (G.P. Walker).

MARYLAND - Area> armyworm status on small grains: Eastern Shore> head clipping still evident in some wheat and barley (485.6 ha), damage peaked week ending June 8 and very little expected week ending June 22, and C> no problems to date. (J.L. Hellman).

HESSIAN FLY (*Mayetiola destructor*) - NEBRASKA - District> County= puparia per infested wheat plant and percent plants infested: S> Webster= 1-4 (averaged 1.5) and 10% and 30% in 2 fields. (Peters).

ASTER LEAFHOPPER (*Macrosteles fascifrons*) - MINNESOTA - Increased but not economic. District> averages per 100 sweeps of small grains [averaged 20 cm tall]: WC> 76, C> 40, SW> 80, SC> 80, and SE> 100. (D. Sreenivasam).

CHINCH BUG (Blissus leucopterus leucopterus) - NEBRASKA - District> County= eggs, nymphs, and adults per 0.3 row m of wheat: E> Lancaster= 15.2, 2.7 1st instars and 0.8 2nd instars, and 7.0 (Ahmad) and S> Adams= no data, no data, and averaged less than 1; farthest west reported to date (Peters, Swanson).

TURF, PASTURES, RANGELAND

DISEASES

A LANCE NEMATODE (Hoplolaimus sp.) - WEST VIRGINIA - District> County= averages of this species and a DAGGER NEMATODE (Xiphinema sp.) per 50cc of soil from Poa pratensis (Kentucky bluegrass) sod on golf course June 5: SW> Putnam= 150-200 and I-10, respectively. (R.L. Williams).

WEEDS

SLENDERFLOWER THISTLE (Carduus tenuiflorus) - CALIFORNIA - New county record. District> County= status on rangeland: San Joaquin Valley> Kern= this noxious weed collected from rangeland near Arvin, June 6, 1978, by D. Poore. Determined by T. Fuller. (C.S. Papp).

FORAGE LEGUMES

INSECTS

ALFALFA WEEVIL (Hypera postica) - UTAH - District> County= status on alfalfa fields week ending June 7: N> Cache= control will be by cutting in nearly all fields due to slow development and light populations, eggs still being laid so damage to second growth possible during June (D.W. Davis, L. Jech); and C> Millard= many fields will need control, populations 5+ per sweep to May 25, larvae 6.6-16.5 per sweep at Abraham, 4 per sweep at Delta, 9 per sweep at Hinckley, and threatening at Oasis and Sugarville areas June 1, many fields sprayed (L. Haskell).

NEW MEXICO - District> County= alfalfa weevil larvae and adults per 25 sweeps of forage legumes: NE> Quay= 0-3 and 1-5 at Tucumcari and Colfax= 0-2 and 0 at Maxwell. (C. Heninger). TEXAS - District> County= status per 20 sweeps of alfalfa: Trans-Pecos> El Paso= adults 11, and Reeves= larvae 20 and adults 15. (J.A. Jackman).

NEBRASKA - District> County= alfalfa weevil status on alfalfa: C> Dawson= larvae 10-493 (averaged 136.6) and adults 0-4 (averaged 1.2) per 100 sweeps in 17 fields; SW> Lincoln= held back regrowth in some eastern fields. (Manglitz, Seevers). MINNESOTA - District> County= larval status on alfalfa: SE> Fillmore, Houston, and Olmsted= up to 20 per sweep; SC> Steele and Waseca= 4-50 per 10 sweeps. First cutting underway or completed in most southern counties and continued warm, dry weather should reduce infestation. (D. Sreenivasam). ILLINOIS - Area> status on alfalfa: Extreme NW> larvae severely damaged new growth and plants to be cut for hay, and NW> Jo Daviess, Stephenson, and Winnebago Counties= treatments generally necessary on stubble. (K.L. Steffey).

WISCONSIN - Alfalfa weevil outbreak conditions peaked in southern one-half area. Damage heavy in few unharvested fields with heaviest populations. Very serious on regrowth alfalfa that had heavy populations in first growth, specifically in sandy or dry upland areas in southwestern one-quarter of State. Extensive spraying of regrowth began in southwestern area. District> County= status on alfalfa: SC> Dane and Columbia, and SW> Sauk, Iowa, Richland,

Crawford, and Grant= alfalfa weevil damage severe to many regrowth fields, tip damage of 80-100% in fields with new growth up to 20 cm, damage mostly by 2nd and 3rd instar larvae indicated that larvae hatched after cutting; SW and SC areas, C> Waushara, Marquette, and Portage, WC> La Crosse and Buffalo= tip damage 100%; St. Croix= tip damage 40%; NE> Oconto and Marinette= tip damage 50%; EC> Door= larvae up to 6 per plant; SC> and SW> damage light to young alfalfa in new seedings; SC> Rock= damage severe in new seeding in winter wheat field, Dane, Rock, and Green= light counts of pupae indicated start of decline for 1979 in this area, damage will remain heavy because majority of larvae in 3rd and 4th instars. (O.L. Lovett).

LESSER CLOVER LEAF WEEVIL (*Hypera nigrirostris*) - IOWA - District> County= status on red clover: WC> Crawford= 90-98% infestation in 5-ha field. Many full-grown larvae present, some pupation. (M.E. LaRue, J.R. DeWitt).

ALFALFA SEED CHALCID (*Bruchophagus rodii*) - NEVADA - First adults of season. District> County= adult on seed alfalfa week ending June 8: W> Humboldt= at Jungo. (L. Stitt).

POTATO LEAFHOPPER (*Empoasca fabae*) - ILLINOIS - Area> status on alfalfa: State-wide> numbers increased, expected to pose problem to new growth. (K.L. Steffey). KENTUCKY - Counts still below economic levels. District> County= status on alfalfa in number of fields (f) (hectares): Midwestern> Simpson, averaged 0.5 per sweep on alfalfa [48 cm tall] in 19f (16.8 ha), Christian, Logan, and Todd= no problems in 5f (29 ha), 3f (13 ha), and 16f (82.2 ha), respectively; C> Warren= averaged 0.44 per sweep of alfalfa [averaged 52.1 cm tall] in 10f (53.8 ha), Hardin and Meade= no problems in 8f (75.3 ha) and 2f (23 ha), respectively. (P.E. Sloderbeck et al.).

MEADOW SPITTLEBUG (*Philaenus spumarius*) - WISCONSIN - First adults of season. District> County= status on alfalfa: SC> Rock= first adults observed, nymphs 2 per 10 stems. (O.L. Lovett).

ALFALFA PLANT BUG (*Adelphocoris lineolatus*) - WISCONSIN - Nymphs increased. Area> nymphs per 10 sweeps of alfalfa: Southern one-fourth> 20-30 common. (O.L. Lovett).

LYGUS BUGS (*Lygus* spp.) - ARIZONA - District> County= nymphs and adults per 100 sweeps of alfalfa; C> Maricopa= 6-80 and 10-290, Pinal= 16-41 and 27-292; SW> Yuma= 12-120 and 10-1,000; and SE> Graham= 106 and 160. (L.G. Blackledge et al.).

SOYBEANS

INSECTS

MEXICAN BEAN BEETLE (*Epilachna varivestis*) - OHIO - District> County= status on soybeans: C> Pickaway and SW> Preble= adults 0.16 and 2.0 per plant (B. Blair, B. Eisley); EC> Coshocton= adults 0.16 per sweep in 1 field [2 trifoliolate leaves unfurled], 98% of plants fed on to some extent; no larvae observed, and Carroll= feeding damage 6% in field, no adults observed (G.P. Walker).

SEEDCORN MAGGOT (*Hylemya platura*) - KENTUCKY - District> County= status on soybeans: Purchase> Calloway= larvae on 80% of soybeans [germinating], damage severe, field will need to be replanted. Expected to occur in scattered locations in other areas of State. (D.E. Foster).

SOYBEAN THIRIPS (Sericothrips variabilis) - NORTH CAROLINA - District> County= status: Central Coastal> Johnston, Wayne, and Lenoir, Northern Coastal> Nash and Edgecombe, and Southern Coastal> Sampson= widespread infestations occurred, damage primarily on lower soybean leaves with water-stunted spots (to 0.2 ha). Controls not warranted until damage appears on terminal leaves. (T.N. Hunt).

PEANUTS

INSECTS

TOBACCO THIRIPS (Frankliniella fusca) - FLORIDA - District> County= counts per peanut bud: NW> Jackson= increased slightly from 2.2 June 4 to 4.4 June 11 at Greenwood. (W.B. Tappan).

COTTON

INSECTS

BOLL WEEVIL (Anthonomus grandis grandis) - TEXAS - District> County= counts per cotton per 100 cotton plants: Lower Valley> Cameron= 0-70, Hidalgo 0-22, and Willacy= 0-5. (J.A. Jackman). TENNESSEE - District> County= status on cotton: Central Basin> Lincoln= 1 adult trapped, all other overwintering surveys negative for ninth week. (Cagle).

BOLLWORMS (Heliothis spp.) - TEXAS - District> County= Bollworm (H. zea) and TOBACCO BUDWORM (H. virescens) eggs, larvae, and damaged squares per 100 cotton plants week ending June 8: Lower Valley> Cameron= 0-82, 0-24, and 0-26, Hidalgo= 0-53, 0-24, and 0-22, and Willacy= 0-54, 0-9, and 0-4. Eggs and larvae per 100 terminals: Upper Coast> Wharton, Fort Bend, and Matagorda= 0-8 in most fields and 0-3. (J.A. Jackman). ARKANSAS - District> County= status: SE> Chicot= larvae neared 1 per plant in some cotton [pre-squaring] fields, treatment made (G. Barnes), Jefferson= 22 H. zea in 10 traps, and Desha= eggs very heavy. (M.A. Mayse).

YELLOWSTRIPED ARMYWORM (Spodoptera ornithogalli) - ARKANSAS - District> County= larvae, all sizes, per 0.3 row m of cotton: SE> Jefferson, Drew, and Desha= 5-9 in some fields. (M. Wall).

TOBACCO

DISEASES

BLUE MOLD (Peronospora tabacina) - FLORIDA - District> County= status on tobacco: NE> Suwannee= almost gone at Live Oak. (W.B. Tappan).

POTATO VIRUS Y - FLORIDA - District> County= status on tobacco: NE> Suwannee= present but not increasing at Live Oak. (W.B. Tappan).

INSECTS

TOBACCO BUDWORM (Heliothis virescens) - FLORIDA - District> County= status on untreated tobacco: NE> Suwannee= some degree of damage on 30% of plants at Live Oak, May 30; decreased to 8% by June 13 after hand topping. (W.B. Tappan). NORTH CAROLINA - District> County= number of tobacco fields (f) above threshold level (10% infestation), heaviest infestation (%), and average infestation (%): Southern Coastal> Bladen= 11 of 275f (about 450 ha), 10%, and 3%, Sampson= none at threshold in 17f, 8%, and 4%; and Northern Piedmont> Granville= 11 of 289f,

40%, and 4%. Populations seemed to decrease in Coastal Plain. (T.N. Hunt). MARYLAND - First tobacco budworm larvae of season. District> County= larvae on tobacco: S> Charles, Prince Georges, and St. Marys= in several fields, no economic damage to date. (J.L. Hellman).

TOBACCO HORNWORM (*Manduca sexta*) - FLORIDA - District> County= counts on untreated tobacco: NE> Suwannee= increased from 7.2% May 30 to 16.8% June 13 at Live Oak, light for time of year. (W.B. Tappan). NORTH CAROLINA - District> County= status on tobacco: E> none at or above threshold in 586 fields; Northern Piedmont> Granville= some fields with small larvae reported. (T.N. Hunt).

GREEN PEACH APHID (*Myzus persicae*) - FLORIDA - District> County= counts per tobacco plant: NE> Suwannee= increased, 38 May 30 to 70 on June 13 at Live Oak. (W.B. Tappan). NORTH CAROLINA - Infestations continue to build up. District> County= status on tobacco: Southern Coastal> Bladen= 2 of 275 fields above threshold (25% plants with reproducing colonies), heaviest infestation 28%, average infestation 7%; Central Coastal> Greene= 1 of 5 fields above threshold with infestation level at 30%, averaged 13%; Southern Coastal> Sampson= 1 of 17 fields above threshold, average infestations light; and Northern Piedmont> Granville= none above threshold in 289 fields. (T.N. Hunt).

POTATOES, TOMATOES, PEPPERS

INSECTS

COLORADO POTATO BEETLE (*Leptinotarsa decemlineata*) - WISCONSIN - Area> status on potatoes: Central Sands> adults trace to heavy, averaged 1 per plant in 1 field with egg masses and recently hatched larvae. (O.L. Lovett). OHIO - District> County= status on tomatoes: NE> Wayne= eggs hatched (D. Simonet) and SE> Washington= controls applied twice (W. Lyon).

CORN EARWORM (*Heliothis zea*) - ARKANSAS - District> County= status on tomatoes: SC> Bradley= large larvae unusually heavy, apparently due to rains interfering with treatment. (M. Wall).

BEANS AND PEAS

INSECTS

EUROPEAN CORN BORER (*Ostrinia nubilalis*) - MARYLAND - District> County= status on early planted snap beans: Eastern Shore> Wicomico, Dorchester, and Caroline= 809.4 ha treated to prevent infestations. (J.L. Hellman).

SEEDCORN MAGGOT (*Hylemya platura*) - COLORADO - District> County= status on pinto beans: N> Larimer and Weld= reduced stands up to 60% in some fields. (W.M. Hantsbarger).

PEA APHID (*Acyrthosiphon pisum*) - WISCONSIN - District> County= counts per sweep of peas: Central Sands area, SW> Sauk, in Spring Green, and SC> Dane and Jefferson= averaged 1 with up to 11. (O.L. Lovett). MARYLAND - Area> status on spring peas: Eastern Shore> exceeded thresholds in 607.0 ha, treatments applied. (J.L. Hellman).

DECIDUOUS FRUITS AND NUTS

DISEASES

APPLE SCAB (*Venturia inaequalis*) - VERMONT - County= percent unformed spores, percent spore immaturity, percent spore maturity, and percent discharged on fruit trees May 24 to June 1: Windham at Putney= 29%, 14%, 14%, and 43%; Addison at Shoreham= 10%, 12%, 10%, and 68%; Grand Isle at South Hero= 90%, 23%, 26%, and 42%; and Bennington at Bennington= 9%, 21%, 18%, and 52%. (R.E. Desrosiers).

FIRE BLIGHT (*Erwinia amylovora*) - WEST VIRGINIA - District> County= status on apples and pears June 8: SW> Kanawha= severe on several home orchard plantings. (R.L. Williams).

INSECTS

CODLING MOTH (*Laspeyresia pomonella*) - WISCONSIN - District> County= adults per trap: SC> Dane= first flight past peak according to pheromone trap catches at Oregon, only 4 caught last period compared with 14 previous period; SW> Crawford= averaged 2 per trap in orchards June 6-12 and 0 all season in 1 trap near Prairie du Chien, and EC> Fond du Lac= averaged 5.3 per day June 5-11. (O.L. Lovett).

PEACHTREE BORER (*Synanthedon exitiosa*) - KANSAS - First of season. District> County= status in peach orchard: NC> Sedgwick= adults taken in pheromone traps. (K.O. Bell, Jr.).

CITRUS

INSECTS

BROWN SOFT SCALE (*Coccus hesperidum*) - CALIFORNIA - District> County= adult average per stem of citrus: San Joaquin Valley> Kern= 10 at Bakersfield. (C.S. Papp).

MAN AND ANIMALS

INSECTS

HORN FLY (*Haematobia irritans*) - NEBRASKA - District> County= average per head on untreated cattle: C> Dawson and SW> Lincoln= 250+. (Campbell). WISCONSIN - District> County= adults per side on cattle: SW> Grant= 30, C> Wood= 5-10, and SC> Rock and Jefferson= 0 on dairy cattle. (O.L. Lovett).

FACE FLY (*Musca autumnalis*) - NEBRASKA - District> County= average per face on untreated cattle: C> Dawson and SW> Lincoln= less than 1. (Campbell). WISCONSIN - District> County= adults per head on cattle: SW> Grant= 7, C> Wood= 5, and SC> Rock= 2. (O.L. Lovett).

STABLE FLY (*Stomoxys calcitrans*) - WISCONSIN - District> County= adults per side of cattle: SW> Grant= 8, heaviest in State; SC> Rock and Jefferson, and C> Wood= 0-2. (O.L. Lovett).

NORTHERN CATTLE GRUB (*Hypoderma bovis*) - WISCONSIN - District> County= status: SW> Grant= adults chased cattle. (O.L. Lovett).

MOSQUITOES - MINNESOTA - Area> biting species in order of abundance; larval collections; and adult light trap collections: Metropolitan Mosquito Control District> Aedes cinereus, Aedes sticticus, and Aedes stimulans; A. vexans 43%, A. cinereus 30%, and Aedes spp. 26%; and A. vexans 40%, A. cinereus 11%, and A. sticticus 7%. Lack of heavy rains prevented major broods of A. vexans so far. (D. Sreenivasam). WISCONSIN - Area> status: S> A. vexans still most annoying species in daytime surveys, heaviest near major streams and wetlands. Cool evenings kept biting tolerable most days; windy weather restricted significant biting to sheltered areas. (O.L. Lovett).

OHIO - Mosquitoes very heavy in traps in spite of unfavorable weather on trapping date. District> County= collection data: NC> Richland= mostly Aedes stimulans, 320 in 1 trap and 90 in another. (M. Reed).

BENEFICIAL ORGANISMS & THEIR ENEMIES

INSECTS

A WEEVIL (Rhinocyllus conicus) - WISCONSIN - District> County= status on Carduus nutans (musk thistle): SE> Walworth= adults on thistle heads June 9, eggs heavy and began to hatch. Weevil introduced few years ago. (O.L. Lovett).

A MYMARID WASP (Anaphes flavipes) - District> County= recoveries of 20% parasitism of Oulema melanopus (cereal leaf beetle) eggs from individual oat fields (unless stated otherwise) May 29 to June 6: INDIANA - NE> Huntington= 100% in Jackson Township; MICHIGAN - SW> Berrien= 22% in Galien Township; PENNSYLVANIA - C> Blair= 33% in North Woodbury Township and 75% in Taylor Township; and NEW JERSEY - N> Warren= 45% and 100% (2 fields) in Franklin Township and 100% in Harmony Township. New county records. S> Gloucester= 63% in Elk Township, June 1, 1979. Collected by G. Garrison and K. Garrity. N> Hunterdon= 35% and 56% (2 fields) in Holland Township, June 6, 1979. Collected by M. Mahoney and M. German. Both determined by V.E. Montgomery. Parasitism 23% and 94% (2 fields) in Alexandria Township. (T.L. Burger).

FEDERAL AND STATE PROGRAMS

DISEASES

No reports of new BARLEY STEM RUST (Puccinia graminis f.sp. tritici) development May 30 to June 12. Collection at Beeville, TEXAS, nursery identified as 17-HNL. (A.P. Roelfs, D.L. Long).

BLACK STEM RUST (Puccinia graminis) aecia collected from Berberis canadensis (American barberry) in Monroe and Greenbrier Counties, WEST VIRGINIA. (Bostic). Heaviest infection observed on this species of barberry in last 5 years in Monroe County, West Virginia. Aecia collected from American barberry in Jackson and Dubuque Counties, IOWA (Larson), Dane and Jefferson Counties, WISCONSIN (Krueger et al.) and Fillmore County, MINNESOTA (Schlick et al.). Aecial infection heavier than usual on barberries in upper Midwest due to cool moist conditions allowing for heavy and continued basidiospore production. (A.P. Roelfs, D.L. Long).

OAT STEM RUST (Puccinia graminis f.sp. avenae) development on oats in the United States less than in previous 2 years on same date but, in general, offset by later than normal crop maturity development May 30 to June 12. Northernmost collection in commercial field west of Dallas, TEXAS. (McDaniel). Following races identified from collections received before June 12. (A.P. Roelfs, D.L. Long).

State> City	Number of Collections	Number of Isolates of Oat Stem Rust Races					
		1 NA-1*	2 NA-5	31 NA-27	NA-29	61 NA-16	76 NA-3
FL> Quincy	2			6			
TX> Beeville	24	7	4	45	11		3
MX> Cd Obregon (<u>Avena fatua</u>)	6		1	12		5	

*See Martens et al. Phytopathology 69:293-294

RYE STEM RUST (Puccinia graminis f.sp. secalis) heaviest in many years on rye in NORTH CAROLINA nursery. (Newton).

WHEAT STEM RUST (Puccinia graminis f.sp. tritici) trace on wheat in northern OKLAHOMA and northern TEXAS in susceptible trap plots of 'McNair 701', northward movement slowest of last 10 years on June 12. Following races identified from collections received before June 12. (A.P. Roelfs, D.L. Long).

State> Area	Number of Collections	Number of Isolates of Wheat Stem Rust Races										
		11 RCR	15 TNM	17 HDC	29 HDL	113 HDM	HNL	HJC	HJQ	RPQ	RTQ	QCB
AL> Baldwin Co.	4	7				3						
FL> Gadsden Co.	1			1	2							
GA> Tift Co.	6										1	16
LA> Franklin Co.	2										6	
TX> Bee Co.	8		1							1	3	4
TX> Uvalde Co.	3		1			3						5
MX> Cd Obregon	6			1	1	4		9				3

For other cereal rusts, see p. 399-400.

INSECTS

CITRUS BLACKFLY (Aleurocanthus woglumi) - FLORIDA - District> County= status: S> Lee= New county record--nymphs, pupae, and adults collected on citrus at Bonita Springs by B. Stevens, May 18, 1979, determined by J. O'Neal, moderately infested tree with 100+ leaves positive; Indian River= property treated in 1978 reinfested, nymphs and pupae collected on leaves of grapefruit tree at Vero Beach, infested 2 other localities at this site since May 18, 1 extends infested area beyond that for 1978, parasites released shortly after discovery of reinfestation, but to date no parasitized recoveries made in this area from releases for this or last year, standard chemical control activities initiated. Delimiting surveys by June 7 resulted in find of 11 infested properties over 8-sq km area, which included nearly all of Bonita Springs; all citrus, mango, and Surinam cherry trees sprayed. Blackflies found at Bonita Springs included parasitized specimens. (F.W. Mead).

Rangeland Grasshopper Situation

Economic infestations developed in many western States. Over 3.5 million ha are under treatment or scheduled for treatment in the cooperative rancher/State/Federal programs. This compares with 338,000 ha treated in the rangeland program in 1978. States with the largest amount of economically infested hectares include Arizona (50,200), Nebraska (158,000), New Mexico (243,000), Oregon (364,000), South Dakota (292,000), Texas (197,000), Washington (76,900), and Wyoming (53,800).

If conditions continue favorable for grasshopper development, additional hectares may warrant treatment in these and other western States. Outlook calls for the heaviest and most widespread infestations since 1958 when over 1.7 million ha were treated. (J.W. Gentry et al.).

State	Principal species	Pest stage	Number per 0.8 sq m
Arizona	<u>Melanoplus sanguinipes</u> <u>Aulocara elliotti</u>	1st instar to adult	40-100
Nebraska	<u>M. sanguinipes</u> <u>Ageneotettix deorum</u> <u>Aulocara elliotti</u>	1st to 4th instar	25-100
New Mexico	<u>M. sanguinipes</u> <u>Ageneotettix deorum</u> <u>Aulocara elliotti</u>	1st to 3rd instar	9-70
Oregon and Washington	<u>M. sanguinipes</u>	2nd to 4th instar	8-35
South Dakota	<u>M. sanguinipes</u> <u>Ageneotettix deorum</u> <u>Melanoplus</u> <u>differentialis</u>	2nd to 4th instar	8-30
Texas	<u>A. deorum</u> <u>Aulocara elliotti</u> <u>Amphitornus coloradus</u>	1st to 4th instar	9-70
Wyoming	<u>M. sanguinipes</u> <u>Aulocara elliotti</u>	2nd to 4th instar	counts not available

GRASSHOPPERS - WASHINGTON - Hatch well underway statewide. District> County= status: C> Klickitat= controls planned for 47,753.1 ha private, 18,616 ha Federal, and 1,214 ha State rangeland and Yakima= infestation in 2nd and 3rd instars, some hatch occurred, controls planned for 20,234 ha of rangeland, east of Moxie; EC> Grant= 1st and 2nd instars, infested 32,375 ha; and SE> Asotin= survey underway at Asotin. (D. Jackson).

NEVADA - District> County= grasshopper averages per 0.08 sq m of private and public rangeland: W> Humboldt= Melanoplus sanguinipes (75%) and Aulocara elliotti and Oedaleonotus enigma (25%) 12+ on 8,316.7 ha in Orovada area week ending June 8. Currently: Mostly 4th to 5th instar nymphs of M. sanguinipes (50%) and A. elliotti and O. enigma enigma (50%) averaged 15+ on total of 3,153 ha in Kings River Valley; southeastern slopes of Santa Rosa Range east of Paradise Hill> averaged 12+ on about 1,800 ha. Controls underway. (D. Kail et al.).

NEW MEXICO - Area> grasshopper status per 0.8 sq m of rangeland: Statewide> Population one-third Melanoplus sp. and two-thirds 3rd instar Melanoplus sp. nymphs, Aulocara elliotti, Hesperotettix viridis, and related species present, nymphs and adults 8-100+ on 0.53 million ha by June 1 (M. Perry); populations economic, 8+ on 1+ million ha as of June 8 (G.L. Nielsen). Currently, SE District> Eddy County= nymphs 10-90 in grasses and weeds along Pecos River. (L. Gholson).

KANSAS - District> County= grasshopper status per 0.8 sq m of rangeland: mostly Ageneotettix deorum, Phlibostroma quadrimaculatum, and Trachyrhachys kiowa in following 3 counties. SW> Kearny= mostly 3rd and 4th instars 19-27 in 7 additional areas, Morton= mostly 2nd instars 1-14 and some hatch continued in Cimarron National Grasslands area, and Hamilton= mostly 3rd and 4th instars averaged 4-23 in 4 areas (M.L. Shuman); NC> Comanche= mostly A. deorum, Melanoplus sp., Melanoplus angustipennis, Melanoplus confusus, T. kiowa, and P. quadrimaculatum averaged 1-10 at 5 sites (G.A. Salsbury). SW> in ditches and field margins: Mostly Melanoplus differentialis and Melanoplus sp. averages, Finney= 10-30, Haskell= 10, Seward= 10-20, Stevens= 5-20, Hamilton= 10-40, Morton= 5-30, field margin damage in corn or sorghum not significant, trace in wheat with no damage, Melanoplus sanguinipes scarce, adults few. (M.L. Shuman). NC> mostly M. angustipennis, Phoetaliotes nebrascensis, A. deorum, and Melanoplus sp. Reno= averaged 2-5 along roadsides and C> Rice= 5-25 along roadsides; SC> Comanche= mostly 2nd to 3rd instar M. differentialis and Melanoplus bivittatus 30-150 on June 10 compared to 20-30 on June 14 in weedy margin along soybean field, decrease possibly due to dispersal, no dead grasshoppers. (G.A. Salsbury).

NEBRASKA - Mostly M. sanguinipes, M. bivittatus, and A. deorum, June 5-13. Nymphs in 1st to 3rd Instar. (Campbell et al.). Mixed species (1st to 2nd instar) in road ditches and crop margins for last 3 counties. (Yawser et al.).

District> County	Number of sites	Number per 0.8 sq m Range	Average
N> Brown	6		less than 1
N> Rock	8	0-4	less than 1
N> Keya Paha	2		less than 1
N> Blaine	5		less than 2
N> Blaine	5	2-23	13.6
N> Arthur	11	2-25	12.1
N> Loup	5	1-20	5.9
N> Loup	13	1-27	11.2

District> County	Number of sites	Number per 0.8 sq m Range	Average
N> Thomas	5	1-36	15.4
N> Cherry	3	2-15	6.3
N> Cherry	11	0-41	8.4
N> Garfield	5	2-42	12.2
N> Logan	4	7-37	18.5
C> Custer	8	0-12	3.8
SW> Keith	7	0-9	5.9
SW> Keith	5	0-13	3.4
SW> Dundy	7	1-36	15.4
SW> Chase	6	6-50	27.0
SW> Perkins	8	0-23	11.6
SE> Lincoln	4	0-11	4.8
NW> Sheridan	10	1-30	9.5
NE> Cedar	50		less than 1
S> Adams	1		13
SE> Nuckolls	50		less than 3

MINNESOTA - Grasshopper eggs hatched; 1st and 2nd nymphal instars trace on alfalfa and small grains. Mostly *M. differentialis* and *M. bivittatus* trace to fewer than 1 per 0.8 sq m in 145 alfalfa fields in 29 counties. (D. Sreenivasam).

JAPANESE BEETLE (*Popillia japonica*) - OHIO - First adults of season. District> County= collection data: NE> Wayne= collected week ending June 9 (Ladd) and Ashtabula= taken in traps set for ROSE CHAFER (*Macrodactylus subspinosus*), May 10. (R. Williams).

PINK BOLLWORM (*Pectinophora gossypiella*) - ARIZONA - District> County= status: C> Maricopa= adults 1-3 per trap per day at west Phoenix; SW> Yuma= 1 adult per trap per day at Parker and 12 on June 1, 10 June 4, 3 June 6, 4 June 8, 11 June 11, 7 June 13 at Yuma experiment station. (C. Chandler et al.).

RANGE CATERPILLAR (*Hemileuca oliviae*) - NEW MEXICO - Area> status: NE> and SC> hatch nearly completed, many egg clusters not hatched. (J. Banfill).

WEST INDIAN SUGARCANE ROOT BORER (*Diaprepes abbreviatus*) - FLORIDA - District> County= status: S> Broward= adults on almost all nursery stock and in environs of nursery at Davie June 8. (R.P. Garry). Nursery quarantined. (F.W. Mead).

DETECTION

NEW COUNTY RECORDS

INSECTS

CITRUS BLACKFLY (*Aleurocanthus woglumi*) - FLORDIA - Lee. (p. 409).

A MYMARID WASP (*Anaphes flavipes*) - NEW JERSEY - Gloucester and Hunterdon. (p. 408).

WEEDS

SLENDERFLOWER THISTLE (*Carduus tenuiflorus*) - CALIFORNIA - Kern. (p. 403).

LIGHT TRAP COLLECTIONS

Precipitation (mm)	Temperature °C.	Trap type of ASPECTS	SUSPENDED BY BACKLIGHT	I = INCLINATION OF MOUNTAIN	DRAKE QUADRANT	BROWN QUADRANT	BLACK QUADRANT	WHITE QUADRANT	CROSS	CROSS	
										Spiders captured	Spiders caught
ARIZONA	Mesa 6/4-10	BL	8							5	5
CALIFORNIA	Bellota 6/10	BL	1							5	5
	Manteca 6/11	BL	1							5	5
FLORIDA	Gainesville 6/7-13	BL								271	271
KANSAS	Garden City 6/7-13	BL	0							1	1
	Rossville 6/15	BL	13							67	67
KENTUCKY	Fayette 6/7-13	BL	0							2	2
	Union 6/6-10	BL	12							6	6
MINNESOTA	Fergus Falls 6/6-12	6-26	trace	BL	6					2	2
	Le Sueur 6/6-12	9-36	42.4	BL	22					70	70
MISSISSIPPI	Stoneville 6/8-14	14-34	trace	2BL	38					13	13
NEBRASKA	Aurora 6/6-14	BL	9							12	12
	Madison County 6/5-11	BL	4							49	49
OHIO (counties)		BL								30	30
	Huron 6/6-13	3BL								74	74
	Wayne 6/8-14	BL								7	7
TENNESSEE	Selmer 6/7-14	BL	2							3	3
	Spring Hill 6/7-14	BL								54	54
TEXAS	College Station 5/31-6/11	BL	0	1						1	1
										28	28
										30	30
										1	1

LIGHT TRAP COLLECTIONS

Pest Interceptions of Quarantine Significance at Ports of Entry

Plant Importation and Technical Support Staff
Plant Protection and Quarantine Programs, USDA

<u>Life Stage</u>	<u>Host</u>	<u>Probable Origin</u>	<u>Port of Entry</u>	<u>Desti-nation</u>
<u><i>Acrolepia assectella</i> (Zeller)</u> Teek moth Det. C. Iijima	larval on onions from baggage	Hawaii	Honolulu	USA
<u><i>Cryptophlebia ombrodelta</i> (Lower)</u> Litchi fruit moth Det. R.K. Kunishi	larval in <u><i>Pithecellobium</i></u> fruit from baggage	Philippines	Honolulu	CA
<u><i>Diaphorina citri</i> Kuwayama</u> a psyllid Det. D.R. Miller	adult on leaves of <u><i>Murraya</i></u> from baggage	India	Kennedy Airport	USA
<u><i>Phoracantha semipunctata</i> (Fabricius)</u> a cerambycid beetle Det. T.J. Spilman	larval adult in dunnage with steel	South Africa	Mobile	USA
<u><i>Scolytus scolytus</i> (Fabricius)</u> a scolytid beetle Det. J.M. Kingsolver	adult in wood crate with iron forgings	Netherlands	Philadelphia	PA
<u><i>Urocerus gigas gigas</i> (Linnaeus)</u> a siricid wasp Det. R.W. Carlson	adult in wood crates with silico manganese	France	Baltimore	MD
<u><i>Vinsonia stellifera</i> (Westwood)</u> a coccid scale Det. J. Dooley	adult nymphs on leaves of <u><i>Stainhopea</i></u> from cargo	Guatemala	Los Angeles	CA
<u><i>Achatina fulica</i> Bowdich</u> giant African snail Det. R.K. Kunishi	adult in passenger baggage	Hawaii	Lihue	CA

METRIC CONVERSION

1 cm = 0.393701 in
1 m = 3.28084 ft = 1.09361 yd
1 km = 0.621371 mi
1 sq cm = 0.155000 sq in
1 sq m = 10.7639 sq ft = 1.19599 sq yd
1 ha = 2.47104 acres
1 sq km = 0.386101 sq mi
1 kg = 2.20462 lb
1 t (metric ton) = 1.10231 short ton
1 kg/ha = 0.892183 lb/acre
1 t/ha = 0.446091 ton/acre

UNITED STATES DEPARTMENT OF AGRICULTURE
Animal and Plant Health Inspection Service
Hyattsville, Maryland 20782

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Cooperative PLANT PEST REPORT

U.S.
DEPARTMENT
OF AGRICULTURE

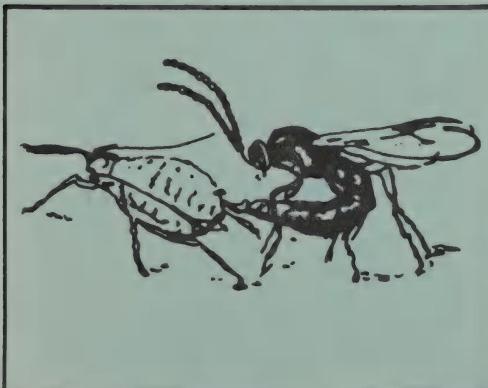
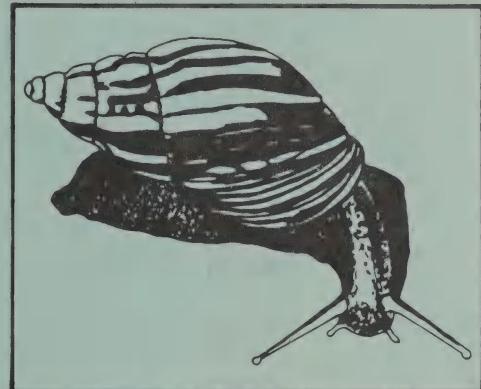
June 29, 1979

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No. 23

Animal
and Plant
Health
Inspection
Service

13 '72

CURRENT SEMI-MONTHLY



This publication is distributed weekly to Federal and State agencies, universities, farmers, and others interested in containing or controlling pests in the United States.

Data included in this publication are compiled from reports submitted by cooperating State, Federal and other agricultural and industrial specialists. Accuracy of the reports is not verified prior to publication.

Cooperative Plant Pest Report supersedes *Cooperative Economic Insect Report*, which was discontinued with Volume 25, Numbers 49-52, 1975.

Correspondence should be directed to:

CPPR

New Pest Detection and Survey Staff
Plant Protection and Quarantine Programs
Animal and Plant Health Inspection Service
U.S. Department of Agriculture
Federal Building #1
Hyattsville, Maryland 20782

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COOPERATIVE PLANT PEST REPORT**HIGHLIGHTS**Current Conditions

EUROPEAN CORN BORER economic in some corn fields in Illinois (p. 419) and infestations still heavy in middle area of Tennessee. (p. 420).

GREENBUG destroyed young sorghum fields in northeast, east-central, north-central, central, west-central, and southwest districts of Oklahoma and some seedling fields in Kansas. (p. 421).

ALFALFA WEEVIL infestations on alfalfa worst ever in Upper Peninsula District of Michigan. (p. 423).

POTATO LEAFHOPPER populations threatening on alfalfa in northern area of Illinois and above economic levels in southern area of Kentucky. (p. 424).

GRASSHOPPERS required control on alfalfa in Michigan and nymphs pose potential problem in some soybean fields. (p. 424). Treatments needed on tobacco in North Carolina. (p. 426). Nymphs range 2-40 per 0.8 sq m of alfalfa in some areas of Washington and 36-60 per 0.8 sq m on rangeland in Texas. Infestations heavy in alfalfa, moderate to heavy in gardens, and fed on wheat heads in some areas of Oklahoma. Defoliated soybeans in field margins and ranged 50-60 per 0.8 sq m in wheat field margin in Kansas. (p. 429, 430).

TOBACCO HORNWORM larvae above economic levels in some southern Kentucky tobacco fields. (p. 425).

PEA ROOT ROT caused severe problems on early peas in several districts in Wisconsin. (p. 426).

FALL CANKERWORM seems near outbreak year in some areas of Michigan. (p. 427).

GYPSY MOTH caused total defoliation in New Hampshire in area where egg masses heavy in 1978. (p. 431).

Detection

AN ERIOPHYID MITE in California is new for North America. (p. 432).

For new county records see page 432.

Some First Occurrences of the Season

COMMON SMUT, COMMON MAIZE RUST, SUMMER BLACK STEM, and an APHIDIID WASP in Kansas. FALL ARMYWORM in Kentucky. BLUEGRASS BILLBUG larvae in Nebraska. REDNECKED PEANUTWORM and COTTON FLEAHOPPER in Oklahoma. OYSTERSHELL SCALE crawler hatch in Michigan.

Reports in this issue are for the week ending June 22 unless otherwise indicated.

CONTENTS

Corn, Sorghum, Sugarcane	
Diseases.....	419
Insects.....	419
Small Grains	
Diseases.....	422
Insects.....	422
Turf, Pastures, Rangeland	
Insects.....	422
Forage Legumes	
Diseases.....	423
Insects.....	423
Soybeans	
Diseases.....	424
Insects.....	424
Peanuts	
Insects.....	424
Cotton	
Insects.....	425
Tobacco	
Insects.....	425
Beneficial Organisms and Their Enemies	
Insects.....	428
Federal and State Programs	
Diseases.....	428
Insects.....	429
Detection.....	432
Light Trap Collections.....	433
Pest Interceptions of Quarantine Significance at Ports of Entry.....	434
Miscellaneous Field Crops	
Diseases.....	426
Insects.....	426
Beans and Peas	
Diseases.....	426
Cole Crops	
Insects.....	426
Cucurbits	
Insects.....	426
Deciduous Fruits and Nuts	
Insects.....	426
Ornamentals	
Insects.....	427
Forest and Shade Trees	
Insects.....	427
Man and Animals	
Insects.....	427

CORN, SORGHUM, SUGARCANE

DISEASES

COMMON SMUT (Ustilago maydis) - KANSAS - First of season. District> County= status on corn: EC> Miami= trace in 1 field. (T. Sim, IV).

COMMON MAIZE RUST (Puccinia sorghi) - KANSAS - First of season. District> County= status on corn: SE> Woodson= trace in 1 field. (T. Sim, IV).

SORGHUM LEAF STREAK (Xanthomonas holcicola) - KANSAS - District> County= status on sorghum: EC> Linn= trace in 1 field. (T. Sim, IV).

LEAF SPOT (Pseudomonas syringae) - KANSAS - District> County= status on sorghum: EC> Linn= trace in 1 field. (T. Sim, IV).

MAIZE DWARF MOSAIC VIRUS - KANSAS - Currently most widespread disease of corn and sorghum in east-central and southeastern areas. District> County= status: NE> Riley= affected sweet corn in garden. Status on corn [4-12 leaf] in fields surveyed (T. Sim, IV):

District> County	Prevalence (%)	District> County	Prevalence (%)
SE> Woodson	trace	SE> Bourbon	trace
SE> Allen	trace	EC> Anderson	1-100
SE> Crawford	trace	EC> Osage	15

Prevalence low on sorghum in fields surveyed, status follows (T. Sim, IV):

District> County	Prevalence (%)	District> County	Prevalence (%)
SE> Woodson	trace	SE> Montgomery	trace
SE> Neosho	trace	EC> Linn	trace
SE> Wilson	trace		

INSECTS

EUROPEAN CORN BORER (Ostrinia nubilalis) - NEBRASKA - District> County= status: NE> Antelope= flight peaked, 1,192, 170, and 520 adults taken in 3 blacklight traps. Female dissection showed most adults mated, with fully developed eggs and some already depleted of eggs. Egg laying will continue, especially in earliest planted fields for next week or more. (Koziol, Witkowski). C> Buffalo= less than 10% of corn [61-102 cm extended leaf height] infested with egg masses or larvae, 1st instar in 4 fields and Hall= no evidence of activity on corn [46-102 cm tall] (Peters). Adults becoming common from Missouri River to Colorado border, 10-15% of females in area mated. E> Butler= fresh egg masses in 1 field of corn [6 leaf], some pupae still in stalks. (Raun).

ILLINOIS - European corn borer infestations (mostly 1st and 3rd instar larvae) in corn whorls highly variable in occurrence depending on planting date. About 10% of corn fields at economic threshold (50% whorl feeding), sampling biased in favor of taller fields. Egg laying seems about complete in southern one-half of State, continued in northern counties. (K. Black).

WISCONSIN - Many corn fields tall enough to be infested by European corn borer. District> County= status: SW> Richland= eggs and young larvae infested about 35% of plants in field near Lone Rock and SE> Walworth, Racine, SC> Rock, and C> Waushara= fresh egg masses found and larval feeding noted and Dane= 100% of overwintering borers emerged from pupal cases at Oregon, decrease in adult population expected in about 2 weeks. (O.L. Lovett).

INDIANA - District> European corn borer larvae on corn: SE> mostly all on surface of leaf, with only occasional mid-rib penetration. Infestations, as indicated by "shothole" feeding, ranged 0-64%, averaged about 15%. Mostly 2nd instar larvae fewer than 2 per stalk. No plants infested in about 36% of fields surveyed. MICHIGAN - District> County= larvae on corn: SC> Clinton= nearly all plants infested in 1 field (N. Yajure) and SW> Cass= present in taller plants (R. Hammon).

TENNESSEE - European corn borer infestations on corn continued to be heavy in middle area, most of larvae in whorls, none in stalks to date. Infestation levels in fields June 15-20 (C. Pless, M. Cooper):

District> County	Infestation level (%)
Western Rim> Robertson	84
Central Basin> Maury	72
Central Basin> Marshall	86
Central Basin> Williamson	56
Central Basin> Bedford	60
Central Basin> Marshall	90

KENTUCKY - European corn borer early instar feeding decreased in southern area but still prevalent in northern area. Damage in northern area apparently not as heavy as in southern area. District> County= number of fields surveyed, number of fields with noticeable damage, and number of fields recommended for treatment June 13-20: Midwestern> Christian= 65 (1,619 ha), 20 (6,475.0 ha, and 11 (205 ha); Simpson= 41 (571.4 ha) heaviest infestation 15%, no data, and no data; Todd= 135 (2,786 ha), no data, and no data; and Union= 148 (2,475 ha), no data, number of fields not given, treatment recommended for 113 ha; and C> Hardin= 40 (645.1 ha), 16, and 3 (44.1 ha). (P.E. Sloderbeck et al.).

ARMYWORM (*Pseudaletia unipuncta*) - OKLAHOMA - District> County= status on young sorghum: Panhandle> Beaver= destroyed stands as late as June 14. (D.C. Arnold). NEBRASKA - District> County= status: SE> Clay= mostly 4th instar larvae up to 5 per 0.09 sq m in bromegrass pasture, larvae observed migrating across road from pastures into row crops. (Peters). E area> severe damage to bromegrass pastures in many locations, movement to adjacent row crops occurred, ranged 4-20 per 0.09 sq m in pastures. E> Saunders= parasitism 15-30% and Douglas= 1 armyworm per plant in 1 corn field. (Raun et al.). MICHIGAN - District> County= status on corn week ending June 8: SW> Allegan= reported in whorls only. (Morrow). Third instar (smallest that is easily detected) of first generation should become heavy during next week to 10 days. (R. Ruppel).

FALL ARMYWORM (*Spodoptera frugiperda*) - KENTUCKY - First of season. District> County= status on corn: Midwestern> Todd and Christian= larvae observed. (J. Settle, D. Tempelman).

STALK BORER (Papaipema nebris) - WISCONSIN - District> County= status in corn field margins: SC> Rock and Columbia= severe damage to individual plants by larvae (2.3 cm long), infested nearly 50% of plants in outer 4 rows in some fields. (O.L. Lovett).

GREENBUG (Schizaphis graminum) - OKLAHOMA - Infestations heavy on young sorghum in many areas of State week ending June 8. District> County= status: NE> Rogers, Tulsa, Washington, Craig, Nowata, Wagoner, EC> Muskogee, McIntosh, NC> Noble, Garfield, Kay, Woodward, C> Lincoln, Cleveland, and Okfuskee= reported. Many fields of young sorghum and sudan hybrids destroyed, will have to be replanted. Counts on young sorghum: WC> Washita and SW> Caddo= some fields destroyed, 50-150 per leaf in some fields [20-25 cm tall]; Panhandle> Texas= averaged 5 per plant; and SW> Jackson= 7-50 per plant in 2 fields [10-15 cm]. Current status on sorghum: Panhandle> Beaver= 2-20 per young plant and Ellis= light; NE> Craig= moderate and Washington= moderate to heavy; and C> Canadian= stand loss reported in few fields. Average per hybrid sudan plant: EC> Cherokee= 20. (D.C. Arnold).

KANSAS - Greenbug flights to sorghum appear down sharply, numbers per plant reported decreased in some areas due to rains. Area> status on sorghum: SC> some seedling fields destroyed, crop not checked soon enough; some fields replanted (R.L. Nuttelman); E> some decrease in populations in southernmost counties (G.L. Kilgore); SW> no significant populations reported in sorghum [2-4 leaf] (D.E. Mock). District> County= status: SC> Stafford and SW> Ford= populations definitely decreased in fields checked, flights down sharply on emerging sorghum [10 cm tall], usually averaged about 1 per plant, but averaged 12 per plant in 1 sorghum [23 cm tall] field in Stafford County (J.R. VanKirk). Finney= infestations usually scarce but up to 20 per plant (D.E. Mock). NC> Clay, Cloud, Republic, Washington, NE> Marshall, Pottawatomie, Leavenworth and EC> Douglas= counts down in northeastern area, typically 0 to 4-5 per plant, considerable hectares treated before recent decrease, some fields still show considerable old damage symptoms (L.C. Bonczkowski). EC> Anderson and SE> Montgomery= appeared to have decreased; EC> Douglas= 6.1 ha destroyed by adults. (S.C. White); EC> Lyon= adults destroyed about 10 of 16-ha field in northeastern area by June 17; populations averaged about 1,000 per plant on remaining sorghum [20 cm tall] plants; stand in second nearby field reduced to point where replanting considered; greenbugs averaged 50 per plant in third field in area with no obvious damage (H.D. Garwood).

NEBRASKA - Greenbug ranged 0-8 in 40% of 1 sorghum [3 to 4-leaf] field, averaged 1.0 per plant, 75% alates. (Tyser, Peters). Area> range (and average) per plant in 6 fields 90-100% (averaged 96.7%) infested: SE> 15-87 (37); alates 0.4-4.4 (2.1) per plant. (Miller).

CHINCH BUG (Blissus leucopterus leucopterus) - KANSAS - District> County= status: NE> Riley= first migration from maturing barley and wheat into sorghum noted, experimental sorghum plot destroyed and others seriously damaged (G.E. Wilde), nymphs migrated into sorghum field [5-8 cm tall] northwest of Manhattan from infested wheat field; populations at least 46 m out into field, smaller plants died, margin treatment not sufficient to check migration, adults apparently migrating during cooler periods of day (K.O. Bell, Jr.).

SMALL GRAINS

DISEASES

TAKE-ALL (Gaeumannomyces graminis var. tritici) - WISCONSIN - Whitehead stage in winter wheat and rye in southern counties. District> County= prevalence: SW> Iowa= about 8% on rye and SE> Kenosha= less than 8% on winter wheat. (O.L. Lovett).

OAT CROWN RUST (Puccinia coronata var. avenae) - KANSAS - District> County= prevalence on oats: EC> Franklin= up to 100% on more susceptible varieties. (T. Sim, IV).

BLACK CHAFF (Xanthomonas translucens f.sp. undulosa) - KANSAS - District> County= prevalence on wheat: EC> Coffey= up to 100% in lodged wheat in some fields. (T. Sim, IV).

INSECTS

ARMYWORM (Pseudaletia unipuncta) - OKLAHOMA - Still present on wheat in some areas. District> County= infestations about gone in areas surveyed week ending June 8 with following exceptions: Panhandle> Texas= reported in Optima area and Beaver= few fields treated; NC> Woodward= 12-30 per 0.09 sq m in some areas; NE> Washington= reported; WC> Custer= 5-8 per 0.09 sq m in few fields; and SW> Caddo= 5-6 per 0.09 sq m in oat field. Parasitism heavy in west-central area. Small grains matured rapidly in all areas, damage should be almost over. (D.C. Arnold).

HESSIAN FLY (Mayetiola destructor) - KANSAS - District> County= status: SW> Clark= about 10% tillers Lodged due to infestation in 64.7-ha wheat field near Minneola. (D.E. Mock). NEBRASKA - District> County= puparia per plant in wheat field: SE> Thayer= 1, field 10% infested. (Peters, Tyser).

CHINCH BUG (Blissus leucopterus leucopterus) - NEBRASKA - District> County= eggs, 1st instar nymphs, 2nd instar nymphs, 3rd instar nymphs, 4th instar nymphs, 5th instar nymphs, and adults per 0.3 row m taken in 12 samples (4.9 m each) in wheat field: E> Lancaster= 2.2, 86.4, 15.6, 5.2, 0.9, 0.4, and 8.95. (Ahmad, Kindler). Adults migrated from wheat into milo/corn. (D.L. Keith).

TURF, PASTURES, RANGELAND

INSECTS

ARMYWORM (Pseudaletia unipuncta) - OKLAHOMA - District> County= status in pastures week ending June 8: C> Lincoln= 5-30 per 0.09 sq m in some areas; NE> Washington= moderate to heavy in fescue pastures and Nowata= heavy in bermuda-grass pasture; and SC> Bryan= moderate. (D.C. Arnold).

A HESPERIID SKIPPER (Thymelicus lineola) - MICHIGAN - District> County= status week ending June 8: Upper Peninsula> Chippewa= small larvae 4-5 per 0.09 sq m in established grass hay (C. Stephens); C> Montcalm= some larger larvae found in rye (M. Kers); and SE> Lenawee= first adults noted (T. Dudek).

BLUEGRASS BILLBUG (Sphenophorus parvulus) - NEBRASKA - First larvae of season. District> County= status: E> Saunders= in turf plots at Mead. (Kindler).

GRASSHOPPERS - ILLINOIS - Infestation spotty, 15-20 specimens (0.64 cm to 1.3 cm long) per 0.8 sq m in many roadsides and water ways. Populations 100+ per 0.8 sq m in grass in few areas. Infestation moved into crops and began to cause trouble. (K. Black). MICHIGAN - Heavy numbers, but threat to crops variable. District> County= status: NE> Cheboygan= heavy infestation in pasture (A. Krezek); SC> Clinton= none seen (N. Yajure); C> Osceola, NW> Antrim, NE> Otsego, and SC> Calhoun= common in weeds and reported in corn, oats, alfalfa, grass hays, and soybeans (R. Kirch et al.).

FORAGE LEGUMES

DISEASES

SUMMER BLACK STEM (*Cercospora zebrina*) - KANSAS - First of season. District> County= status on alfalfa: EC> Chase= reported. (T. Sim, IV).

District> County	Prevalence (%)	Severity	Host height (cm)
SE> Woodson	trace	-	25
SE> Wilson	10%	light	51

FUSARIUM ROOT AND CROWN ROT COMPLEX (*Fusarium* spp.) - KANSAS - District> County= status on alfalfa: EC> Osage= affected several fields, prevalence trace to 2% in 3 fields. Widespread in other parts of east-central and southeastern areas. (T. Sim, IV).

LEPTO LEAF SPOT (*Leptosphaerulina briosiana*) - KANSAS - On alfalfa (T. Sim, IV):

District> County	Prevalence (%)	Severity	Host height (cm)
EC> Osage	70	light	25
SE> Woodson	10	light	25
SE> Wilson	100	light	254

STEMPHYLIUM LEAF BLIGHT (*Stemphylium botryosum*) - KANSAS - District> County= status on alfalfa: SE> Wilson= trace in 1 field. (T. Sim, IV).

A BULB AND STEM NEMATODE (*Ditylenchus* sp.) - OKLAHOMA - District> County= counts of this species, a STUNT NEMATODE (*Tylenchorhynchus* sp.), a LESION NEMATODE (*Pratylenchus* sp.) and a DAGGER NEMATODE (*Xiphinema* sp.) per 100 ml of alfalfa soil from 4 areas of 1 field: C> Payne= 8-156, 24, 8-12, and 108-232, respectively. (K.E. Conway).

INSECTS

ALFALFA WEEVIL (*Hypera postica*) - WISCONSIN - Heavy tip feeding and populations continued in first crop alfalfa in central, east-central, and northeastern areas. Tip feeding ranged 10-100%. District> County= tip feeding: EC> Calumet, Brown, Door, Outagamie, and Kewaunee, NE> Marinette, Oconto, C> Juneau, Waupaca, and Waushara= 100%, harvest should control heavy number of larvae before significant damage occurs, pupae as far north as Brown= and WC> Jackson, Trempealeau, La Crosse, and SW> Crawford= heavy in first crop alfalfa; and NW> Rusk= 40%. (O.L. Lovett). MICHIGAN - District> County= status on alfalfa: Upper Peninsula> Menominee= infestation worst ever to date (R. Breyer) and SC> Ingham= damaged regrowth where part of a stand was destroyed (R. Morrison).

ALFALFA BLOTH LEAFMINER (*Agromyza frontella*) - NEW YORK - District> County= status in forage legume fields: SW> Cattaraugus= very heavy; larvae averaged 7 per stem in 10 stem samples, still in mines. (Hudson).

PEA APHID (*Acyrthosiphon pisum*) - TEXAS - District> County= counts on alfalfa June 15: Trans-Pecos> ET Paso= 5 per 20 sweeps (B.A. Lee) and Hudspeth= 20-40 per 50 sweeps. (C.W. Neeb).

OKLAHOMA - District> County= pea aphid and BLUE ALFALFA APHID (*Acyrthosiphon kondoi*) on alfalfa: NE> Washington= moderate and Wagoner and EC> Muskogee= averaged 100 per 10 sweeps. (D.C. Arnold).

POTATO LEAFHOPPER (*Empoasca fabae*) - ILLINOIS - Area> adults per sweep of alfalfa: Northern two-thirds> 3-6, about 1 per sweep in many fields. Situation threatening, especially if dry weather continues. (K. Black). KENTUCKY - Some forage legume fields in southern area above economic levels as populations increased rapidly over past period. Populations still light in more northern counties. District> County= status in forage legume fields: Midwestern> Simpson= averaged 1.33 per sweep in 9 alfalfa [53 cm tall] fields (107 ha). Two fields (32 ha) above economic levels, either early harvest or treatment recommended. C> Warren= 1 of 2 fields surveyed above economic levels. (P.E. Sloderbeck et al.).

GRASSHOPPERS - MICHIGAN - District> County= status on alfalfa week ending June 8: NW> Wexford= nymphs heavy enough in 1 field to require control. (G. Bartlett). Very early for damage to crops. Infestations heavy as expected, dry weather will move them into crops. (R. Ruppel).

SOYBEANS

DISEASES

SEEDLING BLIGHT - KANSAS - District> County= status on soybeans: SE> Allen and EC> Lyon= in several fields, scattered in other southeastern and east-central areas. (T. Sim, IV).

DAMPING-OFF - KANSAS - District> County= status on soybeans: SE> Allen and C> Lyon= in several fields, scattered in other southeastern and east-central areas. (T. Sim, IV).

INSECTS

DINGY CUTWORM (*Feltia ducens*) - MINNESOTA - District> County= larval status on soybeans: SC> Martin= up to 15 per 0.09 sq m in 1 field, treatments applied; and SE> Olmsted= localized infestations reported. Infestations to continue 7-10 days. (D. Sreenivasam).

GRASSHOPPERS - TENNESSEE - Nymphs heavy in spot checks around some soybean fields, may be problem in some areas later in summer. (M. Cooper, R. Thompson).

PEANUTS

INSECTS

REDNECKED PEANUTWORM (*Stegasta bosqueella*) - OKLAHOMA - First of season. District> County= counts per 5 plants in peanut terminals: SW> Caddo= 1, light. (D.C. Arnold).

COTTON

INSECTS

BOLL WEEVIL (*Anthonomus grandis grandis*) - TEXAS - District> County= punctured squares per 100 cotton plants June 15: Lower Valley> Cameron= 0-76, Hidalgo= 0-42, and Willacy= 0-16. (J. Cocke et al.). OKLAHOMA - District> County= counts in number of pheromone traps week ending June 8: SW Harmon= 5 in 30, Jackson= 3 in 85, and Kiowa, Greer, and Tillman= 0 in 65. Current status in 180 pheromone traps: SW Jackson, Greer, Harmon, Tillman, and Kiowa= none taken. (D.C. Arnold).

ALFALFA WEEVIL (*Hypera postica*) - TEXAS - District> County= larvae and adults on cotton, June 15: Trans-Pecos> El Paso= 13 and 14 per 20 sweeps (B.A. Lee) and Hudspeth= 30-40 and 40-50 per 50 sweeps (C.W. Neeb).

BOLLWORMS (*Heliothis spp.*) - TEXAS - District> County= BOLLWORM (*Heliothis zea*) and TOBACCO BUDWORM (*Heliothis virescens*) eggs, larvae, and damaged squares per 100 cotton plants June 11-15: Lower Valley> Cameron= 0-52, 0-26, and 0-17, Hidalgo= 0-68, 0-34, and 0-29, Willacy= 0-39, 0-27, and 0-10 (J. Cocke et al.) and Coastal Bend> Kleberg= 0-12, 0-3, and 0-8 (R.D. Parker).

COTTON FLEAHOPPER (*Pseudatomoscelis seriatus*) - TEXAS - District> County= counts per 100 terminals of cotton June 14-15: Coastal Bend> Kleberg= 5-95, Nueces= 0-60, (M.A. Rothrock), San Patricio and Refugio= 0-80 (F.W. Parker); South Texas> Jim Wells= 0-60 (M.A. Rothrock); Blacklands> Bell= 50-50 (F.W. Parker), Williamson and Milam= 0-78 (R.E. Glodt), Hill and Johnson= 0-44 (W.C. Buxkemper), Ellis and Navarro= 2-52 (G.C. Moore), McLennan= 20-30 (C.E. Hoelscher), Collin and Hunt= 25-28 per 100 plants (W.E. Ruth); Trans-Pecos> El Paso= 0-4 (B.A. Lee); Lower Rio Grande Valley area> 200+ per 100 plants (J. Cocke et al.); and North Central Texas area> 4-30. (H.A. Turney). OKLAHOMA - First of season. District> County= current range per 100 cotton terminals: SW Jackson, Greer, Harmon, Tillman, and Kiowa= 4-10. (D.C. Arnold).

TOBACCO

INSECTS

TOBACCO BUDWORM (*Heliothis virescens*) - NORTH CAROLINA - Fields reaching threshold decreased June 18-21 as flowering increased. District> County= number of tobacco fields (f) above threshold level, heaviest infestation (%), and average infestation (%): Southern Coastal> Bladen= 2 of 228f on about 470.0 ha, 11%, and 1.7%; Central Coastal> Lenoir= none of 358f, no data, and no data; Northern Coastal> Martin and Washington= 3 of 47f on 111 ha, 11%, and 75%; and Northern Piedmont> Granville= less than 1% of 245f on 263 ha, 15%, and 2%. (T. Hunt).

TOBACCO HORNWORM (*Manduca sexta*) - KENTUCKY - Larvae above economic levels in some southern tobacco fields. District> County= larvae per 20 plants: Mid-western> Logan= averaged 3.4 in 1 randomly sampled field. (P.E. Sloderbeck).

GREEN PEACH APHID (*Myzus persicae*) - NORTH CAROLINA - District> County= status on tobacco: Central Coastal> Lenoir= increased, 13% of 358 fields surveyed June 15-20 at threshold compared to 3.4% June 8 and 3.1% June 15. Heaviest infestation level 50% of plants with moderate to heavy aphid colonies. Average 12% of plants with moderate infestation. Populations light but increasing in northern counties. (T. Hunt).

GRASSHOPPERS - NORTH CAROLINA - District> County= mostly *Melanoplus* spp. on tobacco: Northern Piedmont> Granville= 4 of 245 fields (263 ha) reached threshold June 15-21, treatments recommended. As far west as Northern Mountain> Surry= infestations reported from old tobacco belt. (D. Cobb).

MISCELLANEOUS FIELD CROPS

DISEASES

LESION NEMATODES (*Pratylenchus* spp.) - WISCONSIN - District> County= status in 40.5-ha mint field: SC> Columbia= caused serious damage. (O.L. Lovett).

INSECTS

SUNFLOWER BEETLE (*Zygogramma exclamationis*) - MINNESOTA - District> County= status on sunflowers [8-10 Leaf]: NW> between southwest of Marshall and northwest of Polk= up to 4 per 10 plants along county line, about 20% leaf feeding; Marshall, Polk, Pennington, and Red Lake= averaged 5 per 100 plants in 12 fields. Appeared same time in 1978, but sunflowers currently much younger. (D. Sreenivasam).

BEANS AND PEAS

DISEASES

PEA ROOT ROT (*Aphanomyces euteiches*) - WISCONSIN - District> County= status in early pea fields: SC> Rock, Dane, SW> Sauk, SC> Columbia, C> Waushara, Adams, and Portage= severe problems, yield losses estimated at up to 80-100% in some fields. (O.L. Lovett).

COLE CROPS

INSECTS

DIAMONDBACK MOTH (*Plutella xylostella*) - NEW YORK - Area> status on cabbage: Statewide> larvae in many fields, heaviest 34 per 40 plants. Most seemed to infest heart of plant. Adults 208 in 1 pheromone trap in 3 nights. (Pederson).

CUCURBITS

INSECTS

PICKLEWORM (*Diaphania nitidalis*) - FLORIDA - District> County= status on zucchini, summer, and crookneck squash plantings week ending June 7: C> Alachua= caused economic damage in Gainesville area. (F.W. Mead).

DECIDUOUS FRUITS AND NUTS

INSECTS

PECAN NUT CASEBEARER (*Acrobasis nuxvorella*) - OKLAHOMA - District> County= pink and white egg counts (and percentage) on number of pecan clusters June 2-7: EC> Okmulgee= 5 and 8 (13%) and 6 and 9 (15%) on 100 for 2 days, Pittsburg= no data (1-2%), Muskogee= some pink eggs (no data); C> Oklahoma= no data, both present (10%), Payne= 1 and 2 (2%) on 150; NC> Noble= 1 and no data (1.5%) on 160; NE> Tulsa= 1 and 3 (4%) on 100, Wagoner= no data and 1 (1%) on 100, Mayes= 12 and 15 (27%) on 100, Tulsa= 7 and 8 (15%) on 100, Washington= 13 and 10 (35%)

on 75, and Rogers= both present (47% and 42%) at 2 locations and 12 and 10 (22%) on 100 for 2 days. Adults in light traps: C> Payne= 15 June 5 and 16 June 6 in 2 traps in 1 orchard. Current status on pecans: NE> Washington= moderate to heavy and C> Payne= some eggs still unhatched. (D.C. Arnold).

AN ERIOPHYID MITE (*Eriophyes vaga*) - CALIFORNIA - New North American record. District> County= collection data: Central Coast> Santa Clara= collected from Juglans hindii (Hind's walnut) by D. Cozzola and J. Avila, June 4, 1979. Determined by T. Kono and confirmed by H.H. Keifer. Originally described as *Aceria vaga* by H.H. Keifer in 1962 (Eriophyid Studies B-5:15) from Campinas, Brazil. (C.S. Papp).

ORNAMENTALS

INSECTS

A DIASPIDID SCALE (*Acutaspis perseae*) - FLORIDA - New county record. District> County= collection data on *Cyrilla arida* (ti-ti): NW> Gulf= adults on leaves near Ward Ridge, February 18, 1979. Collected by J. Felty and K. Lowery. Determined by A.B. Hamon. Plants growing in wild. (J. Felty).

A DIASPIDID SCALE (*Gymnaspis aechmeae*) - FLORIDA - New county record. District> County= collection data on *Aechmea* sp. (a bromeliad): C> Gilchrist= adults moderate on leaves of few plants in nursery at Fanning Springs, May 31, 1979. Collected and determined by D. Culbert. Confirmed by E. Mercer. Plants in nursery more than 1 year. (D. Culbert).

FOREST AND SHADE TREES

INSECTS

FALL CANKERWORM (*Alsophila pometaria*) - MICHIGAN - Larvae full-grown and localized defoliation evident week ending June 8 in many areas of State including SE district> Oakland, Monroe, Washtenaw, SW district> Cass, Ottawa, SC district> Ingham, and C district> Midland Counties. Appears to be near outbreak year. (K. Kennedy).

OYSTERSHELL SCALE (*Lepidosaphes ulmi*) - MICHIGAN - First crawler hatch. District> County= status on green ash: SC> Ingham= noted June 4 at East Lansing. Activity will continue for next week or more. (K. Kennedy).

MAN AND ANIMALS

INSECTS

HORN FLY (*Haematobia irritans*) - TEXAS - Counts per head of cattle June 15: Trans-Pecos> Ector, Terrell, and Southern High Plains> Glasscock= 50-100. (C.W. Neeb). OKLAHOMA - District> County= status on cattle: EC> Pittsburg= 5-500 (averaged 100) per head on beef cattle and Muskogee= 50-200 per head on dairy cattle and NE> Craig= moderate. (D.C. Arnold). INDIANA - District> County= average (and range) per side on 75 head of mixed cattle: C> Grant= 15.44 (3-50). (E. Westby).

FACE FLY (*Musca autumnalis*) - INDIANA - District> County= average (and range) per face on 75 head of mixed cattle: C> Grant= 4.4 (1-15). (E. Westby).

MOSQUITOES - MINNESOTA - Area> biting species in order of abundance; larval collections; and adult light trap collections: Metropolitan Mosquito Control District> Aedes stimulans, Aedes cinereus, and Aedes vexans; Aedes spp. 34%, A. vexans 33%, and A. cinereus 20%; and A. vexans 38%, A. cinereus 14%, and A. sticticus 6.5%. Adult Coquillettidia perturbans began to appear. Increased Aedes spp. larval collections indicates presence of small developing brood. (D. Sreenivasam).

BENEFICIAL ORGANISMS & THEIR ENEMIES

INSECTS

A MYMARID WASP (Anaphes flavipes) - District> County= recoveries of 20% parasitism of Oulema melanopus (cereal leaf beetle) eggs from individual oat fields May 20 to June 14: KENTUCKY - Bluegrass> Mercer= 100%, 100%, 75%, and 67% near Salvisa; INDIANA - NE> Huntington= 50% and 33% in Jackson Township and 100% in Clear Creek Township; OHIO - C> Licking= 100%, 29%, 50%, 50%, 100%, and 100% in Eden Township and 50% in Washington Township; MICHIGAN - SW> Berrien= 21% in Buchanan Township and 36% and 25% in Bertrand Township; and NEW JERSEY N> Hunterdon= 100% in Readington Township and 96% in Delaware Township. New county records. C> Burlington= 35% and 45% (2 fields) in Moorestown Township, May 29, 1979. Collected by S. Elderkin. Determined by V.E. Montgomery. Parasitism 100% in third field in Moorestown Township. Monmouth= 69% in Upper Freehold, May 30, 1979. Collected by S. Elderkin. Determined by V.E. Montgomery. Parasitism 63% in second field in Upper Freehold Township. (T.L. Burger).

AN ICHNEUMONID WASP (Bathyplectes curculionis) - OKLAHOMA - District> County= percent parasitism of Hypera postica (alfalfa weevil) larvae on alfalfa May 7 to June 3: Panhandle> Beaver= 97%, Texas= 92%, Ellis= 93%, and Harper= 92%; NC> Alfalfa= 71%, Garfield= 73%, and Grant= 71%; C> Payne= 98%, Canadian= 82%, Cleveland= 87%, Grady= 84%, Lincoln= 89%, Oklahoma= 95%, Pottawatomie= 97%, and Okfuskee= 96%; NE> Tulsa= 98% and Washington= 92%; WC> Blaine= 92%; SW> Caddo= 37%, Cotton= 59%, Greer= 93%, Jackson= 93%, Kiowa= 83%, and Tillman= 84%; EC> Muskogee= 70%; and SC> Carter= 71%, Garvin= 98%, Love= 100%, and Murray= 94%. Statewide average 85.6%, 1978 average 85.3% and 1977 average 88.6%. (D.C. Arnold).

AN APHIDIID WASP (Lysiphlebus testaceipes) - KANSAS - First of season. District> County= status: EC> Anderson= trace parasitism of Schizaphis graminum (greenbug) on sorghum June 18. (S.C. White).

FEDERAL AND STATE PROGRAMS

DISEASES

OAT STEM RUST (Puccinia graminis f.sp. avenae) - KANSAS - District> County= prevalence on oats: EC> Franklin= trace to 5%. (T. Sim, IV).

WHEAT STEM RUST (Puccinia graminis f.sp. tritici) - KANSAS - District> County= status on wheat: SC> Harvey and C> McPherson= trace in 1 field each. Infections too late to cause much damage. (T. Sim, IV).

INSECTS

GRASSHOPPERS - WASHINGTON - Heaviest near heavy vegetation, fields, draws, and on vetch. District> County= Melanoplus sanguinipes (90%) and some Melanoplus packardii per 0.8 sq m: SE> Asotin= 2nd to 5th instar nymphs 2-40 in areas next to alfalfa fields southeast of Anatone and 1st to 3rd instar nymphs 2-30 west of Asotin June 14. Nymphs 1st and 2nd instar, light to moderate in canyons southwest of Clarkston. (D. Keim, A. Retan). COLORADO - District> County= undetermined species on rangeland: EC> Kit Carson, Yuma, and Cheyenne= scattered infestations up to 50 per 0.8 sq m. (W.M. Hantsbarger).

TEXAS - Area> grasshopper status on rangeland June 11-15: Rolling Plains (E.P. Boring, III), South Plains> heavy and St. Lawrence Valley> present (D.G. Foster). Edwards Plateau District> Tom Green and Runnels County= heavy (A.A. Armstrong). District> County= maximum per 0.8 sq m on rangeland: Cross Timbers> Throckmorton= 36; Northern Low Plains> Hall= 40 (E.P. Boring, III), Childress= 40 (J.F. Leser); Northern High Plains> Dallam= 36, Hemphill= 45, Lipscomb= 40, Moore= 81, Ochiltree= 40, and Roberts= 60 (C.D. Patrick).

OKLAHOMA - District> County= grasshopper counts per 0.8 sq m week ending June 8: Panhandle> Cimarron= 8-16 in rangeland; WC> Washita and SW> Caddo= 10-20 in field margins, some marginal damage to young cotton; EC> Pittsburg= 5-15 in pastures and Hughes= 20 in roadsides; SW> Harmon= 25 in fencerows; and SC> Bryan= heavy in pastures and gardens. New county record for TWO STRIPED GRASSHOPPER (Melanoplus bivittatus). District> County= collection data in lawn: SE> McCurtain= adult male in Beavers Bend State Park, June 12, 1979. Collected and determined by D.C. Arnold. Status week ending June 15: NE> Tulsa= grasshoppers heavy in alfalfa and infested gardens; C> Lincoln and SC> Pontotoc= heavy, fed on wheat heads and WC> Washita, SW> Caddo, and C> Grady= ranged 10-15 per 0.8 sq m in edges of cotton fields, fencerows, and ditchbanks in some areas. (D.C. Arnold).

Oklahoma - District> County= current grasshopper status: Panhandle> Cimarron= moderate to heavy in rangeland, lawns, and gardens; NE> Craig= heavy in gardens and Nowata= moderate to heavy in gardens; EC> Pittsburg= mostly Melanoplus spp. heavy in pastures; SC> Bryan= grasshoppers heavy in pastures and gardens; and SE> Choctaw and McCurtain= treatments applied in some pastures and non-crop areas. Counts per 0.8 sq m: Panhandle> Beaver= 10-25 in rangeland; NC> Alfalfa, Woods, Major, Grant, Garfield, WC> Blaine, and C> Kingfisher= 0-5 in wheat fields and 2-10 in weeds in field margins, Oklahoma= 10-20 (Melanoplus differentialis, Melanoplus bivittatus, and other species) in pastures in Luther area and Pottawatomie= 9 in pastures, lawns, and fencerows; SW> Caddo= 6-12 in pastures, fencerows, and ditchbanks; and NE> Wagoner= 40 in fencerows in 1 area. (D.C. Arnold).

KANSAS - District> County= grasshopper status on soybeans: SE> Allen near Humboldt and Labette= defoliated 8-10 rows along margin in 1 field each. (T. Sim, IV). Average nymphs, mostly Melanoplus differentialis, Melanoplus bivittatus, and Melanoplus sanguinipes, per 0.8 sq m in alfalfa fields (f): C> Ellsworth= 0.5 in 2f and Barton= 1-20 in 6f; SC> Stafford= 12 in 1f, Pawnee= 10 in 1f, Edwards= 1 in 1f, and Comanche= 5-21 in 5f; SW> Clark= 2-24 in 2f, Seward= 0-5 in 4f, Finney= 15 in 1f, and Hamilton= 1-30 in 2f; WC> Wallace= trace, Melanoplus differentialis and Melanoplus femur-rubrum hatch continued (K.O. Bell, Jr.); EC> Shawnee= 1-1.5 in 3f (J.D. Lambley); NE> Jefferson= 5 in 1f; and C> Dickinson= 6 in 1f (B.D. Hilbert).

Average, various species of grasshoppers, per 0.8 sq m on rangeland and number of stops (s): SC> Pawnee= 14 and 1s, Edwards= 10 and 1s; SW> Clark= 0.5-12 and 6s, Meade= 5-6 and 2s, and Kearny= 6 and 1s (K.O. Bell, Jr.); SC> Edwards= 3-8 and 3s (G.A. Salsbury); and EC> Shawnee= 3-5 and 2s (D.J. Lambley).

Kansas - District> County= averages mostly Melanoplus sanguinipes, sometimes with substantial numbers of Melanoplus differentialis and/or Melanoplus bivittatus per 0.8 sq m in wheat fields and number of stops (s): C> Ellsworth= 0.2-0.5 and 2s, Barton= trace to 1 and 3s, SE> Stafford= 0.5 and 1s; SW> Seward= 0 to trace and 2s, Kearny= 6 and 1s, Hamilton= trace to 18 and 3s; WC> Greeley= trace to 1 and 2s. Averages, mostly Melanoplus sanguinipes, M. differentialis, M. bivittatus, M. femurrubrum and sometimes Hesperiottix sp. and another species (indicated by asterisks) per 0.8 sq m along field margins and waste areas: C> Ellsworth= 1-2 and 3s, Barton= 1-10 and 9s; SC> Stafford= 5 and 1s, Edwards= 6 and 1s, Comanche= 19-20 and 2s; SW> Clark= 10-60 and 3s, Seward= trace to 20 and 5s, Kearny*= 30 and 1s, Finney*= 10 and 1s, Hamilton*= 10-35 and 6s; WC> Greeley= 5-35 and 3s, Wallace= trace and 1s (K.O. Bell, Jr.); SC> Sedgwick= trace to 8 (no data) and Edwards= 1.5 and 1s (G.A. Salsbury); and EC> Shawnee= 0.5-17 and 6s (D.J. Lambley). Some heavy populations in waste areas and cities in parts of southeastern area. (G.L Kilgore). SW> Hamilton= Melanoplus sanguinipes averaged 30 in wheat in greener areas and 5-6 in drier wheat near Coolidge and Gray= 50-60 along margin of wheat field June 14. (D.E. Mock). Nymphs heavy in some waste areas and mowed brome waterways in parts of northeastern area. (L.C. Bonczkowski).

NEBRASKA - Grasshoppers, mostly Melanoplus sanguinipes, Melanoplus bivittatus, and Ageneotettix deorum surveyed week ending June 7. Nymphs 1st to 3rd instar, majority in 2nd instar. Egg hatch still incomplete in most areas of State. Rangeland survey results May 30 to June 5 (Campbell et al.):

District> County	Range per 0.8 sq m	Average per 0.8 sq m	Sites
C> Custer	0-47	5.7	23
SW> Lincoln	0-27	3.9	15
SW> Chase	0-36	12.5	8
SW> Dundy	0-10	2.8	6
NW> Garden	18-123	58.7	6
NW> Sioux	4-50	14.4	7
NW> Dawes	1-15	7.0	5
NW> Scotts Bluff	0.45	8.8	9
NW> Banner	0-3	0.8	5
N> Loup	0-14	4.9	13
N> Cherry	1-9	3	
N> Hooker	3-67	17.6	5
N> McPherson	2-44	13.2	6
N> Garfield	0-19	3.7	12
N> Logan	0-20	7.0	7
N> Grant	3-56	15.2	9
NE> Cedar	0-1	less than 1	
S> Harlan		less than 1	
SE> Richardson		less than 1	

Nebraska - District> County= current grasshopper status: SE> Nuckolls= light scattered infestations in roadside ditches, alfalfa, and pastures (Hawley). Richardson= Melanoplus spp. 1-2 per 0.8 sq m in field margins, hatch continued (Hopp). E> Butler= fewer than 1 per 0.8 sq m in roadsides and alfalfa and

6 per 0.8 sq m in pastures (Lange). NE> Cedar= 0-3 grasshoppers per 0.8 sq m in pastures and roadsides (Vawser). Knox= 100 per 0.8 sq m in some alfalfa fields (Thomas). SW> Chase and Dundy= range species variable, up to 40 per 0.8 sq m in some locations and 4-5 per 0.8 sq m in other locations (Campbell). Survey results in other areas June 12-20 (D.L. Keith):

District> County	Range per 0.8 sq m	Average per 0.8 sq m	Sites
NW> Banner	0-22	7.1	7
NW> Banner	0-9	3.8	4
NW> Banner	9-117	41	2
NW> Garden	9-100	33.3	4
NW> Morrill	0-111	29.6	5
NW> Scotts Bluff	18-81	37	2
NW> Scotts Bluff	5-36	17.5	2
NN> Cherry	4-41	21.2	8
NN> McPherson	9-38	22	5
NN> Hooker	3-38	15.3	4
NN> Keya Paha	2-54	21.3	4
NN> Rock	9-36	19.5	2
NN> Brown	9-36	19.5	2
SW> Lincoln	7-45	24	10
SW> Lincoln	8-27	17	2
SW> Lincoln	12-43	21	1
SW> Frontier	0-10	4	3
SW> Red Willow	0-18	7	1
SW> Keith	0-63	12.8	4
C> Custer	0-37	7.8	18
C> Custer	23-200	73	3

GYPSY MOTH (Lymantria dispar) - NEW HAMPSHIRE - County= status: Carroll= defoliation clearly evident at outbreak site at Conway. Total defoliation occurred on about 4-8 ha along ridge top where egg masses heavy in fall 1978. Feeding larvae heavy on about 80 ha of hardwood and pine woodland, especially south and west of original infestation; no evident defoliation in this area to date. (Morse, Burger).

RANGE CATERPILLAR (Hemileuca oliviae) - OKLAHOMA - District> County= status on rangeland week ending June 8: Panhandle> Cimarron= hatch well underway. (D.C. Arnold).

SCREWWORM (Cochliomyia hominivorax) - Total of 2 cases reported from continental United States May 27 to June 2 as follows: Texas 1 and New Mexico 1. Number of sterile flies released this period total 59,443,250 as follows: Texas 34,470,250; New Mexico 5,474,000; Arizona 18,939,000; California 560,000. Total of 135,779,066 sterile flies released within eradication zone of Mexico. (J.E. Novy, M.E. Meadows).

DETECTION

NEW NORTH AMERICAN RECORD

INSECTS

AN ERIOPHYID MITE (Eriophyes vaga) - CALIFORNIA - Santa Clara County. (p. 427).

NEW COUNTY RECORDS

INSECTS

A DIASPIDID SCALE (Acutaspis perseae) - FLORIDA - Gulf. (p. 427).

A DIASPIDID SCALE (Gymnaspis aechmeae) - FLORIDA - Gilchrist. (p. 427).

A MYMARIO WASP (Anaphes flavipes) - NEW JERSEY - Burlington and Monmouth. (p. 428).

TWOSTRIPED GRASSHOPPER (Melanoplus bivittatus) - OKLAHOMA - McCurtain. (p. 429).

LIGHT TRAP COLLECTIONS

State	County	Date	Location	Elevation	Precipitation	Temperature	Trap Type			Comments
							M	MM	in.	
CALIFORNIA							2	1		
	Bellota	6/17		BL	BL	BL				
	Manteica	6/19		BL	BL	BL				
INDIANA (Counties)				BL	7					
	Lafayette	6/14-20		BL	0					
	Tippecanoe	6/14-20		BL						
KANSAS				BL	4					
	Hays	6/12, 15, 19		BL	20					
	Rossville	6/19, 20		BL	26					
KENTUCKY				BL	12					
	Fayette	6/14-20		BL	2					
	Hickman	6/14-20		BL						
MINNESOTA				BL						
	Fergus Falls	6/13-19		BL	2					
	Le Sueur	6/13-19		BL	32					
NEBRASKA (County)				BL						
	Dixon	6/15-20		BL	46					
TENNESSEE				BL						
	Selmer	6/14-21		BL						
	Spring Hill	6/14-21		BL						
TEXAS				BL	1					
	College Station			BL						
		6/13-19		BL						
WEST VIRGINIA				BL						
	Monroe	6/18		BL						
	Putnam	6/14-18		BL						
WISCONSIN				BL	6					
	Lancaster	6/13-20		BL	10					
	Mazomanie	6/13-20		BL						

Pest Interceptions of Quarantine Significance at Ports of Entry

Plant Importation and Technical Support Staff Plant Protection and Quarantine Programs, USDA			Desti- nation
Life Stage	Host	Probable Origin	Port of Entry
<u><i>Camponotus crassus</i></u> Mayr an ant	adult in dried flowers from cargo	Brazil	New York NY
Det. D.R. Smith			
Prob. <u><i>Diaprepes abbreviatus</i></u> (Linnaeus) West Indian sugarcane root borer	eggs on leaves of <u><i>Dracaena</i></u> plants from cargo	Puerto Rico	San Juan FL
Det. D.M. Anderson			
<u><i>Gahaniola phragmites</i></u> Erdos a eurytomid	adult on reed mats from cargo	Hungary	Port Everglades FL
Det. E.E. Grissell			
<u><i>Maruca testulalis</i></u> (Geyer) bean pod borer	larval in <u><i>Vigna</i></u> from baggage	Fiji	Honolulu CA
Det. D.M. Weisman			
<u><i>Phaenomerus</i></u> sp. a weevil	adult in wood pallets with nails	Republic of China	San Francisco CA
Det. D.R. Whitehead			
<u><i>Pissodes cembrae</i></u> Motscholsky a weevil	larval in wood pallets from cargo	Japan	San Francisco CA
Det. D.R. Whitehead			
<u><i>Rhaqoletis cerasi</i></u> (Linnaeus) European cherry fruit fly	larval in cherries from baggage	unknown	Miami FL
Det. R. Lyle			
<u><i>Tetramesa</i></u> sp. a eurytomid	larval adult in wild oats from cargo	Italy	New Orleans AL
Det. E.E. Grissell			

METRIC CONVERSION

1 cm = 0.393701 in
1 m = 3.28084 ft = 1.09361 yd
1 km = 0.621371 mi
1 sq cm = 0.155000 sq in
1 sq m = 10.7639 sq ft = 1.19599 sq yd
1 ha = 2.47104 acres
1 sq km = 0.386101 sq mi
1 kg = 2.20462 lb
1 t (metric ton) = 1.10231 short ton
1 kg/ha = 0.892183 lb/acre
1 t/ha = 0.446091 ton/acre

UNITED STATES DEPARTMENT OF AGRICULTURE
Animal and Plant Health Inspection Service
Hyattsville, Maryland 20782

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